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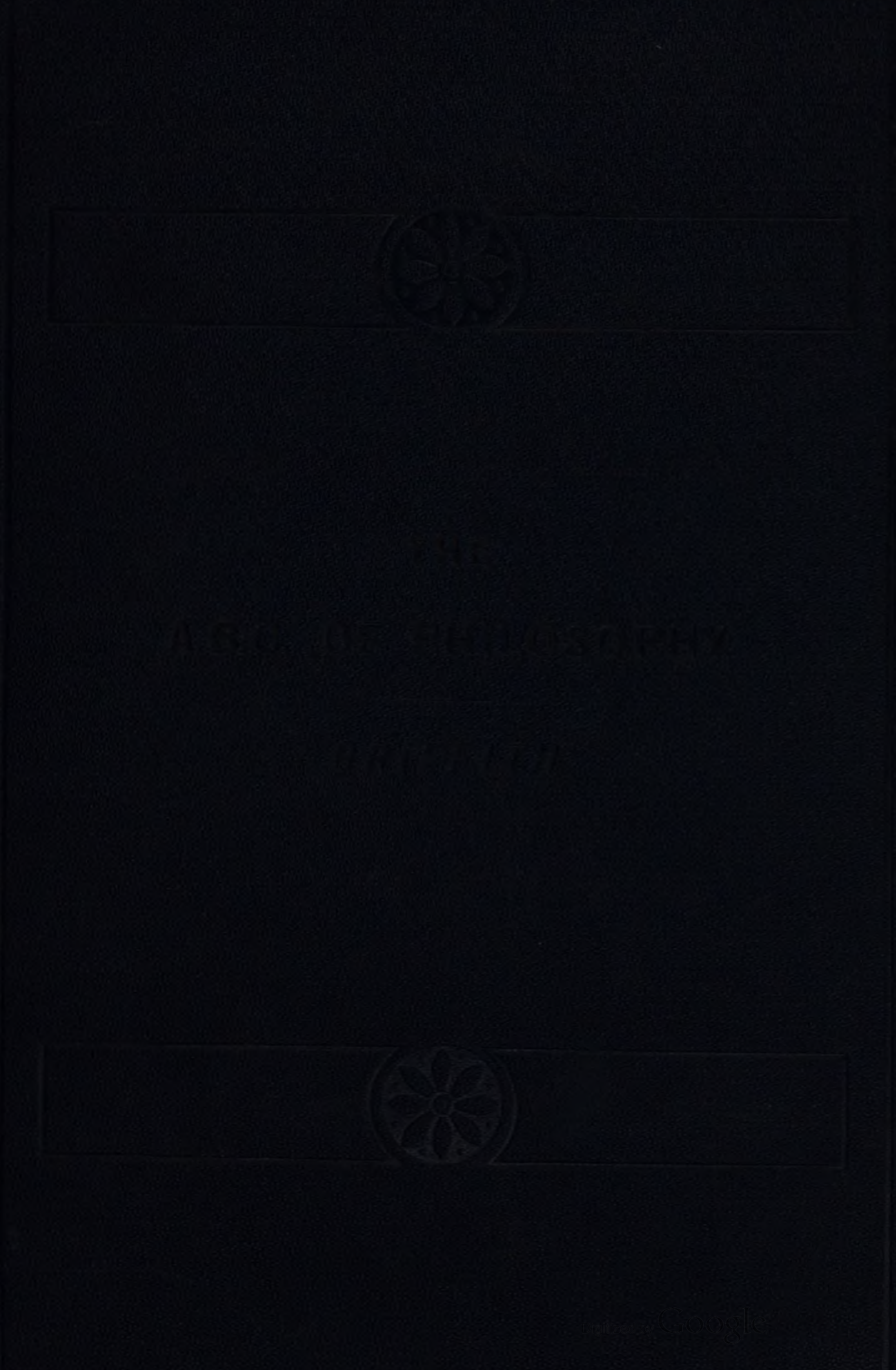

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THE ABC
OF
PHILOSOPHY

A TEXT-BOOK for STUDENTS

BY

THOMAS GRIFFITH, A.M.

PREBENDARY OF ST PAUL'S

> 'That which retards the acceptance of Philosophy is an indistinct perception of its very ALPHABET' FERRIER, *Inst.* p. 44

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265. j. 248.

'We must cultivate true Metaphysics with some care in order to destroy the false and adulterated' HUME

'Through the non-cultivation of Metaphysics in the spiritual schools in England, the Atheist has great facility of dictating, and passing as current, his own metaphysics' F. NEWMAN

Μήτε νέος τις ὢν μελλέτω φιλοσοφεῖν· μήτε γέρων ὑπάρχων κοπιάτω φιλοσοφῶν· οὔτε γὰρ ἄωρος οὐδεὶς ἔστιν, οὔτε πάρωρος, πρὸς τὸ κατὰ ψυχὴν ὑγιαῖνον EPICURUS

'Do not, if young, put off Philosophy; do not, if old, get tired of it; for no one is too green, no one too gray, for what is wholesome to the soul

PREFACE.

THIS VOLUME owes its origin to two deep convictions. First, that the Philosophy of an age materially affects the Theology of that age. And next, that true Philosophy can neither be understood in itself, nor help us to the understanding of the false, unless we study it systematically as an organic whole.

1. As to the first conviction—of the influence exerted by a prevalent Philosophy on Theology—this effect is only part of a still wider ascendency. The whole complexion of human life is affected, often most unconsciously, through shadows cast upon it by the feeblest gleams of philosophical light. There is no department of thought or action which is not tinged by some rays from a source which most ignore and many mock at. 'We cannot,' says Herbart, 'cast a single glance

upon mankind, upon society, or upon the world, without discerning the necessity of some philosophical principles to enlighten and guide us. And since on the nature of these principles the spirit of our business and our pleasures depends, nothing is more indispensable to make life worth living than a combination of true theory with our daily practice.'[1]

But what is true of life in general acquires additional emphasis in relation to our religious life. Philosophy and Religion are so closely akin—they are such twin sisters—that the very life blood of the one affects the life blood of the other. Coleridge long ago affirmed that 'all the *epoch-forming* revolutions of the Christian world, the revolutions of religion, and with them the civil, social, and domestic habits of the nations concerned, have coincided with the rise and fall of metaphysical systems.'[2] And all observation and experience confirm this truth. A gross Philosophy has ever for its shadow a gross Theology. Superstition in Religion weaves its crass conceptions out of corpuscular Physics. A sceptical Philosophy, on the other hand, generates a sceptical Theology. When a spirit in man is questioned, to the same extent is there questioned a Spirit in the Universe.[1] Pessimism of philosophical theory fosters pessimism of religious belief. It is only by a desperate struggle that the Author of Ecclesiastes shakes off fatalism to repose himself on God. And universally, a superficial, meagre, lifeless scheme of thought produces a superficial, meagre, lifeless system of Religion.

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[1] Herbart, *Werke*, i. 556.

[2] Coleridge, *Lay Sermons*, i. 17.

The attempt, therefore, to mark off Philosophy and Theology as different Sciences, working in altogether different spheres, and exercising altogether different 'faculties' (as they speak) of the mind,—the one the offspring of the Intellect, the other that of the Emotions; the one, able to give a reason for its faith, the other glorying in a faith that overrides reason—this distinction, though seized on by both parties as the basis of a hollow truce,[2] is utterly untenable. For man, in all he is, is a unit of force. His mind is a whole. His life is a whole. His laws of thought work as a whole. We are not parcelled off into pigeon-holes, in which contradictory documents may sleep quietly side by side. We do not think piecemeal. Every sensation, every perception, every notion, every idea, is received into the whole mass of thought, moulded by the whole mass of thought, and reciprocally active on the whole mass of thought. Nor are the objects presented for our consideration less indivisible than our Self, the subject, to whom they are presented. The world, in all its departments, is a whole. Its action on us, and by means of us, is the action of a whole. No single presentment comes to us isolated, and in fragments. No single movement takes place without corresponding counter-movements. Each present phase of the heavens, of the earth, of vegetable and animal life, of human culture in society, and of human judgment in the individual, is the complex product of all that has gone before

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[1] 'Nullus in microcosmo Spiritus, nullus in macrocosmo Deus.'

[2] See, on the one side, Hume: 'Our most holy religion is founded on faith, not on reason.' 'To defend Christianity on principles of reason is a sure method of exposing it to a trial which t is by no means fitted to endure.'

And, on the other side, the *Church Quarterly*, Jan. 1880: 'Mr.

Balfour's conception both of religion and science appears to be that of two independent spheres of thought, the product of different classes of faculties (!) and each devoid of authority to erect its own conclusions into a rule for the other. And probably something like this thinkers will in course of time come to be content with' (!!)

and all that is surrounding us. Never has there been so clear an appreciation as now of this Monism or unity of all phenomena; never, therefore, has the necessary identity of the methods by which truth of all kinds must be reached been so clearly obvious as now. 'What we think about men, about the social relations, about the universe, all has such close concatenation, that Science must be bound up with our whole scheme of life.'[1]

And, therefore, it must be bound up with our whole scheme of that which constitutes so essential a part of life—Religion. Divorce Theology from Philosophy! Why, a divine Philosophy underlies all the Theology of Holy Scripture! The Spirit who breathes through all things as a Spirit of order, of concinnity, of mind, is the same who breathed into the Saints of old some surmise of this order, this concinnity, this mind; and thus enabled them to throw out, for their contemporaries and for us, such conceptions of the ground of all things, the growth of all things, the final harvest of all things, as might illustrate, though they could never adequately represent, the grand ideas borne in upon them. Creation, Providence, Grace; God, unveiling Himself by means of his works, his ways, his Son, his Spirit—these are all exponentials of truths behind the veil; of Bible Metaphysics. While, on the other hand, all the main principles of a true Philosophy are but as finger-posts, pointing onward and upward towards Religion. A true Philosophy culminates in Theosophy. I. H. Fichte, the most philosophical of Religionists, and the most Religious of Philosophers, is an instance of this: 'As the truth and completeness of the human spirit in any one direction of its consciousness includes the truth and completeness of all other directions of it, so each of its phases can find its proper complement only in that which constitutes the completeness of our being—Religion. True wisdom, therefore, cannot be regarded as a merely human product of merely human experiences, illusions, guesses, and mistakes. Such a wisdom does, indeed, too often show itself; begotten by the tyranny of circumstance, the worry of self-contradiction, whose final utterance is "Vanity and vexation of spirit." But the wisdom which is from above lifts us up beyond the power of the transient and delusive, in the world and in ourselves, and lands us in the region of divine repose. It discerns the Eternal amidst all changes of time. It assures us that we spring from this Eternal. It promises our return to this Eternal, with Him to complete our glorious destiny. Such wisdom is but the revelation in our consciousness of truths unceasingly dwelling in the bosom of God. It is therefore essentially an inspiration; a descent of God into us. It exalts us into fellowship with God. And in the light of his countenance we find the anomalies, discords, contradictions, imagined by earthly ignorance, glorified into perfect harmony.'[1]

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[1] Herbart, *Werke*, i. 556.

2. But now, if the influence of Philosophy on faith be so important—if the scheme of thought we have adopted, or the filaments of thought which, without our consciousness, have clung to us like gossamer cobwebs in a haze, so unavoidably affect our religious assumptions and emotions—what strength does this infuse into the second conviction whence has sprung this book;—the assurance, namely, that a true Philosophy can never be understood in itself, nor help us to the understanding

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[1] See I. H. Fichte, *Psychologie*, 738–742.

of what is false, unless it be made a subject of early, steady, systematic study, as an organic whole.[1] We can as little, with any advantage, jump into the narrow path of reasoned thought as Bunyan's Formalist[2] could leap over the wall into the King's highway. We must enter in at the wicket gate. Nay, we must have been urged up to this gate by some preliminary pangs of conscious ignorance, indigence, and impotency. The weight of this burden must give earnestness to our inquiries; the hope of shaking off this burden must sustain us at every step; the joy of feeling some approximation to that beaming Countenance the very look of which shall ease us of this burden must be our stay. And hence my aim in this little pilgrim's hand-book is, not to throw out fragmentary scraps of knowledge, but to evolve in regular succession, from the earliest germs of thought, the gradually ripening growths of truth. Beginning with those concomitant phenomena which beget the notion of Extension, in Space (the Statics of Psychology), and proceeding to those consecutive phenomena which beget the notion of Change, in Time (the Dynamics of Psychology), our investigation culminates in those phenomena of co-ordination which proclaim the presence, both in Space and Time, of an adjusting, harmonizing, unifying Mind.

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[1] See Cicero (*De Nat. Deor.* i. 4), maintaining that then first is Philosophy understood when its main questions are contemplated in their close connection with each other: 'Omnes Philosophiæ partes, atque omnia membra, facillime noscuntur, cum totæ quæstiones scribendo explicantur; est enim admirabilis quædam *continuatio seriesque rerum*, ut aliæ ex aliis nexæ, et omnes inter se aptæ, conligatæque videantur.'

[2] 'They said that to go to the Gate for entrance was by all their countrymen counted *too far about*; and that therefore their usual way was to *make a short cut of it by climbing over the wall.*'

But, of course, no more than an outline of procedure could be ventured on, to be filled in by personal study. The leading principles indicated, the accompanying citations of authorities from the History of Philosophy, must be supplemented by individual thought or class instruction; and may be so to any extent, upon these simple lines. And, indeed, only what we thus think out for ourselves do we really make our own. Our mental nourishment, like our bodily, must be inwardly digested, if we would grow thereby. And I am sure that anyone thus making Philosophy his aim, will find in it his exceeding great reward. He will find this much abused Personage no smothering

Nightmare, but an angel visitant, winged and warbling.[1] She will appear to him, as she did to Boethius,[2] with a countenance majestic yet full of sympathy; with eyes of piercing brightness, yet raining gentle influences; at one moment compressing herself within the bounds of his poor human measure, though at another dilating into commerce with the skies; till her enraptured votary exclaims, from sacred intimacy with the heavenly vision,—

> 'How charming is divine Philosophy!
> Not harsh and crabbed as dull fools suppose,
> But musical as is Apollo's lute,
> And a perpetual feast of nectar'd sweets!'
>
> Milton, *Comus*, 476.

---

[1] 'Quant à la Philosophie, je la veux ailée et chantante.'—*Joubert.*

[2] Boethius, *De Consol. Phil.* i. 1: 'Mulier reverendi admodum vultus, oculis ardentibus. . . . Nunc ad communem sese hominum mensuram cohibebat, nunc vero pulsare cœlum videbatur.'

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THE ABC OF PHILOSOPHY.

CHAPTER I.

THE NECESSITY OF PHILOSOPHY.

METAPHYSIC has been derisively termed the Art of going astray upon a plan.[1] Nor would the censure be altogether undeserved by speculations that, deserting the solid ground of Cosmology which investigates the *Make* of the world, soar into the impenetrable mists of Cosmogony, which conjectures the *Making* of the world.[2] 'To attempt,' says Socrates, 'any explanation of the origin of the universe, and of the process of its birth and growth, is to play the fool.'[3]

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[1] 'L'art de s'égarer avec méthode.'

[2] Cf. Lotze, *Metaphysik*, p. 488: 'Wir haben nicht die Aufgabe die Welt zu *machen*, sondern nur die den innern Zusammenhang der verwirklichten zu verstehen.'

[3] *Οὐδὲ περὶ τῆς τῶν πάντων φύσεως, ᾗπερ τῶν ἄλλων οἱ πλεῖστοι, διελέγετο, σκοπῶν ὅπως ὁ καλούμενος ὑπὸ τῶν σοφιστῶν κόσμος ἔφυ, καὶ*

46

Yet, on the other hand, just views of the *Make* of the universe are indispensable to us. For we were born 'for large discourse, to look before and after'; and even children soon find stirring in them such irrepressible questions as What? Why? Whence? Whither? Therefore the same Socrates, while contemning speculation about the origin of things, contemned equally indifference to the constitution of things. Agnosticism was to him as foolish as Gnosticism. 'He counted those who believe in nothing beyond their senses as themselves out of their senses.'[1]

But then the objection is urged, How can we know anything beyond our senses? Metaphysical systems rise, like meteors, for a moment, only to dazzle and fume out.[2] Their mere Terminology repels us; our ignorance of their very language discourages us. We shrink from them as a person ignorant of Euclid shrinks from the Principia; as one with only common arithmetic shuts up a treatise on the Differential Calculus; as one un-

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τίσιν ἀνάγκαις ἕκαστα γίγνεται τῶν οὐρανίων. ἀλλὰ καὶ τοὺς φροντίζοντας τὰ τοιαῦτα μωραίνοντας ἀπεδείκνυε.—Xenophon, *Mem.* i. 1. 3.

[1] τοὺς δὲ μηδὲν οἰομένους εἶναι δαιμόνιον, ἀλλὰ πάντα τῆς ἀνθρωπίνης γνώμης, δαιμονᾶν ἔφη.—*Ibid.* i. 1. 2.

[2] This natural perplexity, and the distaste for philosophy arising out of it, are well described by Xenophon, *Mem*. i. 1. 3. See Appendix, Note I.

versed in Hieroglyphics stares at the inscriptions on Cleopatra's Needle. We determine to abide by simple common sense, unaware how much of this is simple no sense. We forget that, every one being a metaphysician born, there is no choice left but between good Metaphysics and bad, between the vagaries of arbitrary opinion and the reasoned conclusions of scientific judgment;[1] for 'without the knowledge of *Why*, that is, of the grounds or reasons of things, there is no possibility of not being deceived.'[2]

What then remains for us but to adopt the suggestion of Professor Ferrier, and try to get some distinct perception of the Alphabet of Philosophy?[3] For assuredly such an alphabet there is. Some primary elements there are which will preserve us from either deriding the inscriptions on the face of Nature as unknowable, or hazarding groundless guesses, in the place of an intelligent study of these inscriptions. And then only can such a study be carried on with pleasure or issue in success, when the main principles in question are followed as they spring up, linked continuously together, according to their natural genesis and growth. In such connection, therefore, I endeavour, in the following pages, to submit them to the student's methodical consideration.[1] I begin with the leading PROBLEMS of Philosophy, which arise from the observation of well-known facts; and then proceed to the solutions which have been successively offered of these problems, touching MATTER, MOTION, and MIND.

---

[1] 'The eradication of music, painting, and poetry would be an easy task compared with the suppression of Metaphysics. Metaphysics of some sort there must be. The only alternative is between the good Metaphysics of clear-headed Philosophy and the trashy Metaphysics of vulgar Positivism.'—W. James, in *Mind*, July 1879.

[2] Hales, of Eton. See Appendix, Note II.

[3] See Ferrier, *Inst. of Met.* p. 44: 'That which retards the acceptance of Philosophy is a loose grasp, an indistinct perception of its leading principles, of its very alphabet—an imperfect apprehension of the work it has to do, of the object it proposes to overtake.'

---

[1] Cf. Cicero, *De Nat. D.* i. 4: 'Omnes Philosophiæ partes atque omnia membra tum facillime noscuntur, cum totæ quæstiones scribendo explicantur; est enim admirabilis quædam continuatio seriesque rerum, ut aliæ ex aliis nexæ, et omnes inter se aptæ conligatæque videantur.'

CHAPTER II.

THE PROBLEMS OF PHILOSOPHY.

PHILOSOPHY is the passion for wisdom;[1] the burning desire to know something of the grounds, the relations, and the laws of Being. The term is due to the modesty of Pythagoras, when he said, 'Let no one presume to call himself wise. God alone is wise. Man can never get beyond a passion for wisdom.'[2]

Hence it follows that Philosophy is no mercenary traffic with thought for the sake of profit, but a loyal devotion to thought as the queen of the world.[3]

And next, that the wisdom to which Philosophy devotes itself is no mere apprehension of things taken separately, but a comprehension of things in their relations to each other. It seeks for unity in multiplicity.[1]

---

[1] See Plato, in *Diogenes*, 63: φιλοσοφία ὄρεξις τῆς θείας σοφίας. And again, in *Rep*. vi. 485 *a*, 'It is of the essence of Philosophers to have a *passion* for knowledge:' τοῦτο μὲν δὴ τῶν φιλοσόφων φύσεων πέρι, ὡμολογήσθω ἡμῖν ὅτι μαθήματός γε ἀεὶ ἐρῶσιν. 'There are some in whom the love of speculative truth amounts to a passion.' —L. Stephen, *English Thought*, i. 5. Add App. Note III.

[2] Diog. Laert. i. 8.

[3] See, for authorities and illustrations, Appendix, Note IV.

This search takes different names according to the difference of the subjects it enquires into. Whence we have a Philosophy of Nature; of Mind; of Morals; and of Religion. Still, before all particular Philosophies, as indispensable to our successful treatment of each, we must begin with settling those universal Ideas of which all the facts in each particular subject of thought are but exponents, and on which therefore our due interpretation of these facts depends. This is what Aristotle calls the Primary Philosophy.[2]

Now this Primary Philosophy must not be adventurously jumped to by *à priori* speculation, but must be carefully tracked and hunted out by investigation of actual things. To find the Ideas in the light of which alone we can interpret Facts, we must begin with enquiring into Facts. All true Philosophy, therefore, is (what Comte claims as peculiar to his own) a 'Positive' Science; i.e. a Science taking its data from Facts, and dealing throughout with Facts.[1] 'Notions do not drop down upon us ready formed from heaven; they must be fashioned and refashioned out of the facts of earth. They have a history, and their entire meaning for us depends upon this history.'[2]

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[1] See Appendix, Note V.

[2] See Appendix, Note VI.

Still, while only with Facts must we begin, we cannot stop there. They must be the starting-point, but not the terminus, of Thought. For 'no fact is either final or original; and we therefore cannot limit ourselves to the contemplation of it alone.'[3] Facts, indeed, are the parents of Notions; but these Notions, in proportion as we examine them, betray to us internal contradictions. They demand further investigation, in the course of which some new thought emerges which solves the contradiction. This thought may be considered as the Complement of the Notion. And so arises the Science of Metaphysics which complements the Notions built up out of Facts.[1]

---

[1] To translate 'Philosophie Positive' by 'Positive Philosophy' is to commit the (very common) error of adopting a foreign word with (not its own but) an English meaning. 'Positif' does not mean what we express by 'positive': it means 'matter of fact.' To say a thing is 'positif' is to say 'it is a fact.' A 'positif' person is a matter-of-fact person as contrasted with an Idealist, a Romancer. See Saisset, *Essais*, i. 246: 'Newton, ce génie sévère et *positif*, mortel ennemi des chimères, trop absorbé peut-être dans la *contemplation de l'ordre physique*.' And Uchard (*Rev. des D. M.* Sept. 15, 1878): 'Jean était *positif*, et ses passions ne s'étaient jamais attardées à la *poésie* du rêve.' Whence, 'Philosophie Positive' is 'matter-of-fact Philosophy'; Philosophy *à posteriori*, *deduced from Facts*, instead of, like the *à priori* systems, *educed from Fancy*.

[2] 'Begriffe fallen nicht vom Himmel; sie bilden, verändern, modificiren sich; sie haben eine Geschichte, ihr Inhalt, ihre Bedeutung, ihre ganze Natur hängt eben von dieser Geschichte ab.'—Noiré, *Grundlegung einer Phil.* 15.

[3] Tyndall, *Fragments of Science*, 377.

Hence it follows that the first step towards Philosophy is hesitation about the Notions supplied to us by current opinion. If we do not question these we shall never discriminate what is accidental in them from what is essential, and so must settle down into unreasoning *Dogmatists*—or Sticklers for *mere* opinion. Yet, on the other hand, this questioning contains within itself the seeds of ultimate conviction, and so we escape from being equally unreasoning *Sceptics*—or Sticklers for *no* opinion.[2]

Now the Method (or path of transit) by which Philosophy advances from Facts, and unreasoned Notions about Facts, through questioning, to ultimate Science, or reasoned conviction, may be illustrated by the investigation of the simplest natural Object.[3] Take a flower (say a hyacinth) and observe the Facts it brings before you. Note its properties, its process of development, its symmetry. You cannot do so long without Enquiry being roused within you. The object is simply an appearance—a fact occurring in your mind; but, then, it is an appearance made up of many associated appearances. The presentments[1] are *concomitant*, or linked together as one flower; *consecutive*, succeeding each other as the flower suffers change; and *co-ordinated*, helping each other, as parts to a whole, and means to an end, in the construction of the flower. But the concomitance of divers points begets the notion of Extension, which introduces the question about Matter. The changes of these points beget the notion of Succession, and therewith the question about Motion. And the co-ordination of these points begets the notion of Adjustment, and therewith the question about Mind.[1]

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[1] See Herbart, *Lehrbuch der Phil.* § 6. Add Appendix, Note VII.

[2] *Ibid.* § 33. Add Appendix, Note VIII.

[3] See Herbart, *Metaphysik*, i. 46.

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[1] 'Presentments.' For this is the proper word for what Epictetus calls our φαντασίαι, or impressions received through the senses; what Locke called 'Ideas' in the sense of 'whatever the mind is employed about while thinking;' and Hume 'perceptions.' Compare Milton, *Comus*:

'Of power to cheat the eye
And give it false *presentments*.'

And in *P. L.* v. 486, he uses the word 'Fancy' not in the modern sense, but as the equivalent of φαντασία, 'perception':

'both life and sense,
Fancy and understanding, whence the soul
Reason receives.'

1. Let us then examine our flower in these several aspects. First, as a group of various *concomitant* properties (i.e. of presentments *proper to* a hyacinth, characteristic of the flower as a hyacinth). You see brought together in it the properties of a plant—of a flowering plant—of a plant which has colour, fragrance, and so on. Then the question arises, Are these properties mere creations of my own mind? Have they no existence except there? Do they spring originally from myself? or are they impressed upon me by something which is not myself?

They may possibly spring originally from myself alone. For I find this flower, though presenting certain appearances in close connection, as if it were extended before me in space, yet not continuing the same to me at every glance. The complex of form, and colour, and smell becomes different at different moments. The flower contracts, withers, dies off. And then, not till another season comes round do its presentments reach me as before. May not, therefore, my conception of such presentments be all that really exists ?

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[1] These same three fundamental Particulars are implied by Antoninus when he says (vii. 23), 'The universal Nature (Motivity) has fashioned all things out of a universal Substance (Matter); like as the die imprints upon the wax its form (Mind).' And similarly Augustin (*Conf.* i. 6): 'With Thee are the unchangeable *elements* of all things changeable (Matter); with Thee the stable *causes* of all things unstable (Motivity); with Thee the eternal *reasons* of all things unreasoning (Mind).' See the Texts in Appendix, Note IX.

But if so, whence comes it, that when the season returns, this group of properties comes before me again, not as a mere reminiscence of something past away, not as a revival only of my former conception, but as a new object, fresh, and now first seen ?

Besides, when I first observed this hyacinth, it rose not in me by an act of my own fancy, but through some impression on my senses. It was not the product of my will, but of circumstances independent of my will. Seeing, therefore, that this object appears and disappears without my bidding, the ground of its appearance and disappearance must lie in something beyond my bidding, that is beyond my self. The very terms in which alone I can speak of this object imply this. We have an 'impression' of it; it is a 'presentment' to us, an 'appearance' before us, which excites in us 'sensations' of form, colour, fragrance, &c. But 'impressions' point, as to their necessary correlates, to *things* that make impression; 'presentments,' to *things* that make themselves present; 'appearances,' to things that put in an appearance; 'sensations,' to things which affect our sensibility.[1]

Suppose then that, in order to find out the *thing* which is presenting to me the various properties of this hyacinth, I proceed to dissect the plant, and to subject it to distillation in a retort. Then, many new appearances will show themselves —gas, oil, water, oxygen, carbon; and next, from the carbon, salts and ashes. Yet still, each of these new appearances will raise in me, as much as did the undissected and undistilled flower, the notion of a some *thing* having certain properties; while no one of them singly, nor all of them combined, will restore to me the properties pertaining to a hyacinth. Neither its growth, nor flowering, nor colour, nor fragrance will be found among the results of my chemical analysis. I have discovered, therefore, nothing of *the thing* which had for me these properties, or the material which presented them to me. And so the question arises, *What* is this material? That is, What is MATTER?

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[1] See Herbart, *Hauptpunkte der Met.* 20, 'Wie viel Schein, so viel Hindeutung aufs Seyn.' And *Met.* ii. 78, 'Wenn Nichts ist, auch Nichts erscheinen muss.' That is, All Becoming is a sign and proof of Being; all *Ex*-istences must have their ground in *Es*-sences. *Ex nihilo nihil fit.*

2. But in this flower I have noticed points, not only concomitant, or accompanying one another, but *consecutive*, or superseding each other. Such a perception begets in me the notion of Change, and therewith the enquiry, Whence comes this change? Now the usual answer is, From certain 'Forces' at work upon the flower. And truly, on the 'Forces' (e.g.) of Light, and of Moisture, the growth of this hyacinth manifestly depends. But then no one will assert that, along with the light and the rain from heaven, there have come down on our flower its peculiar colour and fragrance; seeing that this same light and rain are helping so many other plants to put forth entirely different colours and scents. It is plain, therefore, that some specific inward cause must be producing in this hyacinth those particular colours and that particular fragrance by which it is differenced as a hyacinth from other plants. Light and moisture have no smell. Nor can the growth of this flower be attributed to any infusion into it, or any effusion out of it, of these agents. So that the presence of light and moisture as causes of this growth is simply unintelligible, and we must have recourse to some other cause within the plant itself, over and above the stir produced in it by those outward influences of light and

moisture. Nay, we must give up ascribing the changes in this flower to any one particular cause, and must attribute them to the joint presence, and joint operation, of many causes, within the flower and without it. And this notion of the joint presence and joint operation of many causes obliges our enquiry into Change in general, and so lands us in the Problem about MOTION.

3. But a closer observation of this hyacinth will bring us into another stage of thought. For its presentments are found to come not merely concomitantly, and consecutively, but also *co-ordinately*, each being adjusted to each, and each to all, in the relation of parts to wholes, and means to ends. The form, the colour, the fragrance of this flower depend on the correspondence of its particles with each other, and with their surroundings. But interdependence and correspondence imply a Ratio, or proportion of things to each other. And Ratio is Reason. The adjustments, therefore, which we notice in this flower are adjustments of Reason. They mark the presence in it of Reason. But Reason is the characteristic of Mind. That, within ourselves or without ourselves, which exhibits prevision and provision, to produce definite

results by means of definite arrangements, we call Mind. And in this case there is shown to us the presence of Mind distinct from our own, and independent of our own. For we are quite aware that we have not ourselves conferred on this object these correspondences, but have only recognised their existence in the object itself. Some, indeed, have said that man is more richly endowed than all his surroundings, and brings to those surroundings the appearance of co-ordination. But, so far from this, the ordinary man is unsuspicious of such co-ordination. He sees the reign of nothing but 'muddle'; whence the more primitive view of natural events as resulting from a conflict of opposing deities,[1] or from the caprices of arbitrary will. Only gradual scientific culture leads us to the full conviction of a constant, universal order. And what follows? Order proves an ordering Mind. Constant, universal order, a steadfast, universal Mind; a Mind in Nature, as well as in ourselves; distinct from ours though similar to it. And thus we are landed in the third Problem of Philosophy—that concerning MIND.

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[1] Compare, for instance, Virgil, *Æneis*, i. 135:

> 'Sed motos præstat componere fluctus.'
> 'But first 'tis fit the billows to restrain,
> And teach the winds obedience to my reign.'

CHAPTER III.

MATTER.

THE 'first notion,' or common opinion, about Matter, defines it as 'the collective name for the ponderable, visible, and resistant objects of sense.'[1]

But our examination of an 'object of sense,' in the case of our flower, has taught us that this resolves itself, under analysis, into new forms. Whence has arisen another definition of Matter as 'the durable cause of our changing sensations.'[2] And this definition calls forth the question, *What*, then, *is* this durable cause? To which question, the first set of answers may be designated as those of

NATURALISM.

For the earliest enquirers were simply observers of Nature, and out of Nature, therefore, constructed their theories. Among the elements familiar to them they sought about for some one element in particular which, from its prevalence in 'objects of sense,' might be regarded as the primary material, or *Mother-stuff*, of which they were made; i.e. their *Matter*.[1]

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[1] Lewes, *Problems of Life and Mind*, ii. 253.

[2] *Ibid.* 230.

Thales began with conjecturing this Mother-stuff to be *Water*. 'Most of the earlier thinkers,' says Aristotle, 'assumed as the beginning of things some sort of Matter. For that, of which all things consist, out of which they evolve themselves at first and into which they resolve themselves at last—that substance which *remains the same* amidst all changing affections of it—these thinkers declared to be the primary element and cause of all things.[2] Still, they did not agree as to *what* this substance is. Thales, the leader in this sort of philosophy, affirmed it to be Water. To which conjecture he was probably led by observing that every thing is nourished by Moisture; for though living creatures are generated by Heat, this Heat itself is generated by Moisture; and the seeds of all things are moist.'[1]

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[1] For 'Matter,' i.e. *Materia*, comes from *Mater*, and ultimately from the Sanscrit *Mâ*, to make. Whence Mâtar, *μήτηρ*, mater, matrix, mother. Compare the chemical term *Mother-tincture*, And in this sense Seneca uses the word, *Nat. Qu.* Præf.: 'Tunc naturæ rerum gratias ago cum secretiora ejus intravi; cum disco quæ universi *materia* sit.'

[2] Comp. Herbart, *Met.* ii. 82: 'Die blosse Anerkennung des *Nichtaufzuhebenden* ist der Begriff des Seyns.'

Next came Anaximenes, who, observing that the life in man depends upon his breathing, concluded that the universal *Air* of which breath is an emanation, and in which all things are infolded like a babe in its mother's womb,[2] must be the primary element of existence. For, 'all things are out of Air evolved, and into Air revolve themselves again.'

But Heraclitus preferred to accept as the First Material, *Fire*; that glowing Ether to which Water owes its generative power, and Air its life. 'The world,' he declares, 'is an ever-living Fire, inflamed according to measure, and subdued according to measure' (i.e. varying in intensity of self-manifestation); 'for all things give and receive Fire, just as coin gives and receives gold; and out of Fire all things evolve themselves and into Fire revolve.'[3]

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[1] For the original Texts, see Appendix, Note X.

[2] Comp. Jeremy Taylor (*Holy Living*, i. 3): 'We may imagine God to be as the air, and we all inclosed in his circle, wrapt up in the lap of his infinite nature, or as infants in the wombs of their pregnant mothers.'

[3] This identification of Fire with originative Being is recognised by Virgil, *Æn.* vi. 730:

'Igneus est ollis vigor, et cœlestis origo.'

Then Empedocles, combining these three elements with that of *Earth*, assumed this combination to constitute the universal Material. For 'these are always found remaining permanent in all things; undergoing no change but that of the proportion in which they may be mixed up together; and moreover, as from Unity they at first emerged, into Unity they converge.'

But this led to Anaximander's seizing on this *Unity* itself, out of which all particular elements emerge, as the ground of all things. It lies beneath and before all distinction of these elements, and therefore may be called (as Coleridge renders it) 'the Indistinction';[1] 'the substance' (as Theophrastus explains it) 'undetermined as to kind and degree.' This, therefore, is 'without beginning, unbegotten, imperishable, undying, indestructible. And the uprising out of it of distinctive existences is in fact a Fall. For all *dis*tinction (or heterogeneity) is a decline from *in*distinction (or homogeneity), and therefore must bring with it at last its proper penalty for such decline, of *ex*tinction; or re-absorption into the primitive, homogeneous, undifferentiated One.'

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[1] Τὸ ἄπειρον, which Lewes (*Hist. of Phil.* 1 ed. i. 44) deems 'a mere abstraction,' but afterwards (p. 46) allows to be 'in a great degree physical, for it means *all things*.'

Here, however, we are met by Leucippus and Democritus, who reject the notion of a One, undifferentiated, universal substance, and give us in its place a multiplicity of very differentiated, individual substances, endowed with very definite distinctions of shape, position, and power. The universe is, with them, not a development of Unity, but an agglomeration of Units. The many are not derived from One, but are themselves a primitive Multitude. All things visible, divisible, and variable, are but combinations and configurations of particles invisible, indivisible, and invariable. And these particles, being the minutest possible,[1] irreducible to any smaller quantities, are termed Atoms, i.e. such as cannot be *cut* into smaller pieces. Nevertheless, these Atoms are still corpuscular, and have the qualities pertaining to body, of shape, size, and weight.[2]

This is the theory which has been adorned by the poetry of Lucretius, and is pronounced by Lewes 'one of the profoundest yet reached by human subtlety.'[3] Yet it is clogged with difficulties. It raises questions not easily to be answered about the constitution of these original 'Atoms'; their position in relation to each other; and the possibility of any corpuscular molecule being indivisible. For, 'every such Atom must have an upper side and an under side, a right side and a left; or, if spherical, must have a periphery covering some assignable area; and by no effort can we imagine sides so close that no plane of cleavage can pass between them, or a sphere so minute that it cannot be divisible into hemispheres.'[1] Nay more; 'a physical Atom is *ens fictitium*, which may be made subservient, as cyphers are in Arithmetic, to the purposes of hypothetical construction *per regulam falsi*; but, transferred to Nature, it is in the strictest sense an *absurd* quantity; for extension and consequent divisibility, or multeity, is the indispensable condition under which alone any thing can appear to us, or even be thought of, as a *Thing*.'[2]

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[1] Mr. Crookes estimates the particles of 'radiant Matter' in a bulb with a diameter of 13·5 centimetres, at a quadrillion.

[2] Aristotle, *Met.* i. 4: διαφέρει τὸ ὂν ῥυσμῷ καὶ διαθηγῇ καὶ τροπῇ. Lewes, therefore, is wrong when he says that Democritus denied all weight to Atoms, and ascribed to them only Force.

[3] *Hist. of Phil.* 1 ed. i. 152.

And therefore the modern advocates of this theory, dropping the notion of indivisibility, restrict our attention to those of Shape and Size; and make *Extension* the one distinctive attribute of Matter, and so of Atoms. But here they forget that

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[1] See Fiske, *Cosmic Phil.* i. 1–5.

[2] Coleridge, *Idea of Life*, 45.

'Extension is only an appearance, which depends entirely on the conditions under which our perceptive power acts.'[1] Whence the perpetual variations of perception according as our post of observation and our powers of observation vary. The Size, for instance, of an object is to us great or small according to our distance from it. The palm of our hand, held close to us, eclipses the disk of the far-off Sun. And again, the Solidity of an object is judged of by its impenetrability or resistance to pressure; but this resistance we find in inverse proportion to the force which we exert against it. So also the Shape of an object is different to different observers, nay to the same observer when looked at from different points of view, at different distances, through different media, under different states of the eye, and with different powers of the glasses used by the eye.[2] 'This, then,' says Mr. Lewes, 'is the vital question of all Philosophy, on the solution of which depends to a great extent the solution of all other problems: What is the relation between Sense and the sensible thing? Let us make this clear by an illustration. At the distance of 50 yards you descry a tower; it is round. What do you mean by saying "It *is* round"? You mean that the impression made upon your sense of sight is an impression similar to that made by some other objects, such as trees, which you and all men call "round." Now, on the supposition that you never approach to that tower, you would always believe it to *be* "round" because it *appeared* so. But, as you are enabled to approach it, and as you *then* find that the tower is square and not round, you begin to examine into this difference. It appeared round at the first distance, and yet you say it really is square. A little knowledge of Optics seems to explain the difference, but does not. "At 50 yards," you say, "it appears round, but it really is square." "At 50 yards," we reply, "it appears round, and at one yard it *appears* square; but it *is* neither; for both "round" and "square" are *conceptions of the mind*, not attributes of things; they have a subjective, not an objective, existence.'[1]

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[1] Magy, *Science de la Nature*, 250.

[2] A notable instance of this variation of perception with variation of circumstances occurs in Mr. Senior's *Conversations with Thiers*, ii. 267: 'A musquet, whose precision depends on calculation of distance, is of little value. A man appears to be nearer or more distant according to the state of the atmosphere; according to the brightness or darkness of his dress; according to his being in light or in shadow. A hair-breadth's difference of elevation will send the ball above his head or beneath his feet.'

Other writers, therefore, giving up Extension as the essential quality of Matter, take refuge in *Weight.* For, in fact, the ultimate residue to which chemical analysis brings us is Weight. Yet even this quality is not always to be found. The so-called 'Imponderables' show the presence of elements which exhibit nothing but 'resistance,' i.e. impenetrability.

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[1] Lewes, *Hist. of Phil.* 1 ed. ii. 153.

To Resistance, therefore, others have recourse, as the last resort. Mr. Spencer says: 'Our conception of Matter, reduced to its simplest shape, is that of co-existent positions which offer *resistance.*'[1]

But here it must be asked, What, then, are 'positions which offer resistance'? Position is simply 'the state of being posited, or placed.'[2] And a state must be the state of some Thing. 'Positions,' therefore, are no more than the States of some *Things* in relation to other Things. These 'positions' are no Things themselves, and cannot therefore have the quality of 'resistance.' And so we are troubled with the further question, 'Positions of *what*?' and can get no answer but 'Positions of certain elements of Matter, which offer resistance,' i.e. which have impenetrability.

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[1] Spencer, *First Principles*, 1 ed. 232. So also Lewes (*Basis of Mind*, 345): 'Matter is primarily *the resistant*, and secondarily whatever can be imagined as such; so that molecules, atoms, and ether are ranged under this head of Matter.'

[2] Dr. Johnson.

Yet Mr. Murphy contends that 'impenetrability' is not an essential quality of all elements of Matter. For 'in Chemistry, the compound often occupies less space than the sum of the spaces occupied by its constituents. Therefore, these constituents must have coalesced, and occupied the same point.' And I. H. Fichte says: 'We know by facts that the smallest particles of air are incessantly penetrated, at one and the same moment, by waves of Sound and of Light; that at the same time a vast magnetic stream is flooding them; and that currents of electricity are also constantly running through the minutest atoms of organic bodies; so that, at every instant, all these Forces interpenetrate each other. We must, therefore, give up the untenable doctrine of absolute impenetrability.'[1]

Amidst these conclusions about Matter, it is natural to fly, as many now do, from corpuscular Atoms into the region of what is called *Ether*. The corpuscular Atoms are imagined to swim in a sea of ethereal Atoms. But, then, these ethereal Atoms are soon found to be endowed by their inventors with the same material qualities as their grosser brethren. The Authors of the 'Unseen World' tell us that 'the vortex motion of the Ether must be impossible on account of the minuteness of its *density*.' Again: 'Nothing is more established than the excessive minuteness of its *resistance*.' And again: 'The properties of the Ether are of a much higher order' (not, mark, of a different *kind*) 'than those of *tangible matter*.' So that, by this hypothesis of ethereal Atoms, the problem is only shifted, not solved. We are no better off than before. We have still only an extremely rarefied form of *Matter*.[1]

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[1] I. H. Fichte, *Anthropologie*, 188.

Other thinkers, therefore, with Boscovich and Faraday, desert Atoms altogether, and take refuge in simple *Force*. And Spencer retreats from his notion of Matter as 'co-existent positions which offer resistance,' to affirm in the very next page that '*Forces*, standing in certain correlations, form the whole content of our idea of Matter.'[2]

But here, in the first place, we are surreptitiously transported from the Problem concerning Matter into a quite different one, concerning Motion. For 'Forces' are intelligible only as causes of Motion, and explain, not Being, but the activities of Being.

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[1] See Fiske, *Cosmic Phil.* i. 6. So Lewes also (*Basis of Mind*, 345): 'Ether is ranged under the head of Matter.'

[2] *First Principles*, 1 ed. 233.

And next, we are put off with words in the place of things. For, 'Force' is a mere collective for 'forceful acts'; and forceful acts pertain only to forceful Agents. 'Force,' therefore, denotes no Subject, but only the predicate of a Subject. Consequently, 'Forces' convey to us no notion of what Matter *is*, but, at the utmost, only of what Matter *has*, or what Matter *does*. It expresses simply a Function of Matter. Whence, to speak of Matter (as some do) as 'a Function of Force' is to talk about a function of a function.

Some suspicion of this absurdity is betrayed by those who prefer to speak, not of 'Forces,' but of 'Centres of Force.' They rightly conceive Forces as merely the function of some unknown central elements which put forth force. But, then, they leave still unanswered the original question of this Chapter, and call from us another question: What, then, are '*Centres* of Force'? You have given up Atoms, both corpuscular and ethereal; for these last you find, after all, to be only sublimates of grosser matter. You have given up 'positions which offer resistance,' for a 'position' is nothing but a state of things. You have given up 'Forces,' for these are only functions of *Things* which have force. And you have fled, in the last resort, to 'Centres of Force.' Now, then, what are 'Centres of Force'? Are they something natural, or supernatural? physical, or metaphysical? To which there is no answer but that of Haeckel: 'The forces of crystallisation, of gravitation, of chemical affinity, remain incomprehensible. We can never apprehend the first causes of any phenomena.'[1] Which is only going back (and rightly) to Anaxagoras.

> Some things are certain, many things are dark,
> But *all mysterious in their primal spark.*[2]

Thus we are driven, by the failure of all mere Naturalism, to turn our attention secondly to

IDEALISM.

The Leader in this School, was Pythagoras, who, penetrating through the mere appearances of

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[1] Haeckel, *Hist. of Creation*, i. 32.

[2] Blackie, *Wise Men*, 211. According to *Lucret.* i. 875:

> 'Id quod Anaxagoras sibi sumit, ut omnibus omnes
> Res putet inmixtas rebus *latitare.*'

And Sext. Emp. *adv. Math.* vii. 140: *τῆς τῶν ἀδήλων καταλήψεως τὰ φαινόμενα εἶναι κριτήρια.* And again, vii. 90: *οὐ δυνατοί ἐσμεν κρίνειν τἀληθές.*

Nature, assumed (whether literally or only in symbol is uncertain) for the ground of all things sensuous, the entirely supersensuous principle of 'Number,' which makes itself observable in all. Some, indeed, of his followers would not affirm that things were produced by Number, but only *in accordance* with Number. They regarded Numbers as the Patterns of which things were copies. Yet others held that, just as the most complicated processes of Arithmetic involve the presence and power of the elementary Numerals, so the most complex forms of perceptible existence involve the presence and power of imperceptible essences. Nature is not only regulated, but produced, by Numbers.[1]

From this the path was easy to Plato's doctrine of *Ideas*. For 'Ideas,' like Pythagoras's 'Numbers,' are the determining Patterns of Things. Nay, Plato widened the theory of the immanence of supersensuous *Quantity* in all actual quantities, into a theory of the immanence of supersensuous *Quality* in all actual qualities. Thus, in whatever we see to be useful, beautiful, good, there must be inherent, as their pattern and their ground, a constitutive Utility, Beauty, Goodness. Man, as differenced in quality from other animals, must have his pattern and ground in a constitutive *Ideal-Man*. And universally, Things visible are gleams from the invisible; imperfect copies of perfect originals.

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[1] For the Texts, see Appendix, Note XI.

But then, in all this, Plato is simply ascending from particulars to universals, and then conferring on these universals an existence independent of particulars; nay regulative, and even constitutive, of particulars.[1] They are not only patterns, but producers; not only models, but makers, of all actual existences. They are the highest abstractions erected into objects. What we call universal notions, and regard as only thoughts in the mind, Plato regards as true Realities (ὄντως ὄντα), out of the mind.[2] The 'Idea,' e.g. of Man, is that perfect quality of humanity which is not found, and cannot be found in any individual man, but which yet *is*, independent of all individuals, prior to them, as a pattern for them.

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[1] Cf. Coleridge, *Lay Sermons*, xlvii.: 'Whether Ideas are regulative, according to Aristotle and Kant; or likewise constitutive, and one with the power and life of nature, according to Plato and Plotinus, is the highest problem of Philosophy.'

[2] Herbart, *De Plat. sys. fundamento*, 35: 'Ne hæsitemus affirmare, illa ipsa esse Platonis ὄντως ὄντα quæ nos quarumcunque rerum *notiones generales*, nec quicquam nisi animi esse cogitationes, dicere solemus.' And *Ritter and Preller*, p. 233: 'Hoc quam maxime Platonis doctrina a Socratis distabat, quod ille ideas separatim a rebus existere docebat. Quapropter Plato, imaginibus ut assolet rem persequens, ideas tanquam in alio mundo existere, neque tam *cogitari* quam mente pura *adspici*, iisque omnium sensibilium causas atque rationes contineri, et ipsas etiam vita et motu atque intellectu præditas esse docet.' So also Ferrier: 'The universal element is called by Plato an Idea.' See his *Lectures*, i. 232.

Aristotle, therefore, was right when he condemned the 'Ideas' of Plato as, first, mere 'sublimated sensibles'; and, next, having no genetic connection with sensibles, 'not immanent in them but sundered from them.' Yet Aristotle himself was not more happy in going back to the 'indistinction' of Anaximander (for his view amounts to that), and substituting for Plato's 'Patterns and their Copies' his own more vague conception of 'Matter and its Forms:' Matter, as the invisible, universal, *possibility* of the impressions made on us through the senses; Form, as their visible, particular actualisation. For in this scheme, as much as in the 'Numbers' of Pythagoras, and the 'Ideas' of Plato, we are thrown back from Facts to fiction; from the known to the unknowable; from what is clearly 'posed' before us, to what is dimly *sub*-posed as its ground and cause.[1]

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[1] See Huber, *Forschung nach der Materie*, p. 7: 'Auch bei Aristoteles ist die Materie die von allen Formen und *jeder Bestimmung* noch leere *Möglichkeit* dieses oder jenes zu werden.'

This manifest failure in the assumptions of Idealism, brought on that reaction which asserted itself in

SCEPTICISM.

For the Sceptics recalled men from fiction to Facts, from the possible to the actual, from the abstract to the concrete. They require us to remain content within the confines, however narrow, of the accessible. One world only, they affirm, is open to our ken. Of 'things in themselves' we know simply nothing. All we can discern are the presentments in our own minds. In sensation all knowledge has its origin, and the highest flights of thought are no more than modifications of sensations, sublimates of sensations. All we are cognisant of is, first, 'Impressions' made on us through our senses; next, 'Conceptions' framed out of these Impressions; then, 'notions' formed concerning these conceptions, and carried through a process of continuous abstraction, from particulars to generals, and from generals to universals. So that our knowledge can never get beyond the confines of our individual Self. The weaving of it is entirely the work of the individual Self. The web, thus woven, is, in its finest reticulations, the product of the individual Self. We see nothing external to us; we see only 'presentments' within us. And the nature of these presentments depends on the nature of the individual Self in which they take place. They receive their shape and colour from this individual Self. They change perpetually in shape and colour according to the changes of this individual Self. As even our first sensations are conditioned by the state of the nervous tissue, and we hear, see, touch, taste, and feel according to the state of the organs appropriated to those purposes; so do the subsequent conceptions, and the corresponding notions which we fashion out of these sensations, vary with the variations of the individual Self. As much as our impressions of objects depend on the lens through which we look at them, and the condition of the eye that makes use of this lens; so much do our conceptions depend for their width or narrowness, their clearness or dimness, their truth or falsehood, on our mental eye being strong or weak, healthy or diseased, clear or clouded. 'Though we should soar into the heavens, though we should sink down into the abyss, we never go out of ourselves. It is always our own thought we are looking on.'[1] 'Man, therefore, nay each individual man, is the measure of all things.'[2] No one, consequently, can lay claim to absolute 'knowledge'; no one can get further than relative 'opinion.' We cannot affirm of anything what it *is* in itself, but only what it *appears* to us; and appears to us according to the position we occupy, and the power of perception we possess, at each successive moment of time.[1]

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[1] Condillac.

[2] Cf. Plato, *Theæt.* 152: *πάντων χρηματων μετρον ἀνθρωπον* . .

This is the doctrine which has come down from Ænesidemus, through Hume and Comte, to our modern 'Positivists,' or Philosophers of Fact; and 'Agnostics,' or Philosophers of Ignorance. 'The external world,' says Lange, 'is a mere appearance appertaining to our race; an "idolum tribus." Anything, therefore, that may be producing this appearance is entirely unknowable. We can speak of it neither as material nor spiritual; neither as Stuff, nor Force, nor Will, nor Idea; for these are all no more than notions that we gather from the sphere of observation and experience, and are valid, therefore, only in this sphere. Consequently, of the Absolute, as we know nothing, let us nothing affirm.'[2]

But there is here a misleading use of the term

οία μὲν ἕκαστα ἐμοὶ φαίνεται, τοιαῦτα μέν ἐστιν ἐμοί· οἷα δὲ σοὶ τοιαῦτα δὲ αὖ σοί.

[1] See Plato, in Appendix, Note XII.

[2] Lange: 'Nichts zu sagen was wir nicht wissen.' See Vaihinger, *Deutsche Phil. im XIX. Jahrhundert*, 24–26, 121.

'Know.' It is true that we know not, and never can know, *what* things there are beyond the sphere of sense; but it is not true that we cannot know *that* such things there are. Nay, the very appearances in the sphere of sense, of which we are cognisant, *oblige us* to admit corresponding things non-apparent, beyond the sphere of sense. For, that certain things do *appear* to us, is a Fact. And such a Fact involves in itself two correlative certainties: the certainty of Objects *not ourselves* which cause these appearances; and the certainty of a *Subject*, which *is our Self*, in whom these appearances are caused.[1] All, indeed, that our senses bring before us is only that which *becomes*—an ever shifting panorama. But such 'becoming' can be predicated only of that which *is*. Something which *is* must be originant of this 'becoming'; and something which *is* must be receptive and cognisant of this 'becoming.' Even the most fleeting clouds have sprung from something, and display their shiftiness to some one.

Grant only consciousness and its contents—Whence have arisen these contents? What has occasioned the impressions, conceptions, notions, ideas which make the sum of these contents?

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[1] See this at length in Appendix Note XIII.

They are ours, but not exclusive products of our Self. They constitute our consciousness, but they have not been evolved from the depths of our consciousness, alone. We see them in their birth; but they have not leapt full formed from our own mind. They are the result of a long continued interaction between our Self and somewhat which is not our Self. Self has been one factor only, co-operant with other factors. Spontaneous generation is as entirely a fiction in Mind as Tyndall has shown it to be in Nature. We do not, e.g., see what we choose to see, but what is given us to see. We do not hear, feel, taste what we please, but only what is brought before our organs of hearing, feeling, and taste. We do not even frame conceptions, notions, and ideas at random, at our own will, according to our own fancy, but only out of such material as the senses have supplied to us. Whence, then, this supply?

This question can be answered only by a doctrine of

REALISM,

which admits and demands a world, not ourselves, as the occasion of those sensations which we experience in ourselves. There must be realities underlying all the appearances of which we are conscious, as certainly as for reflections seen by us in a mirror there must be objects out of that mirror to produce these reflections.[1] 'Every appearance is one half only of a *relation*, which cannot exist without its complementary other half.'[2] Nay, the very term 'appearance' carries with it the assumption and the evidence of a something which *makes appearance*. The very impressions, sensations, perceptions which we speak of as 'Facts' are only certain '*changes made*' ('facta,' things effected) in our own consciousness,[3] and imply, as their necessary precursors and producers, *things that make* these changes made. All we feel and see are but affections of our own Self, presentments to our own mind's eye;[4]

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[1] See Seneca, *Nat. Qu.* i. 4: 'Non enim *facit* quidquam speculum, sed *ostendit.*'

[2] Dr. Stirling, in *Schwegler*, p. 458.

[3] All our direct knowledge is simply and solely that of changes taking place in our own consciousness. See Berkeley, *Principles*, ii. 3: 'That neither our thoughts, nor passions, nor ideas exist *without* the mind, is what everybody will allow. And to me it seems no less evident that the various sensations, or ideas impressed on the sense, however blended or combined together, cannot exist otherwise than *in* a mind perceiving them.' The acceptance of this primary truth 'that we *feel* nothing but our own sensations' was naturally hindered by the secondary error with which Berkeley clogged it, 'that there *is* nothing but our own sensations' (except God).

[4] 'If the details of Kant's criticism differ from those of Hume, they coincide with them in their main result, which is the limitation of all knowledge of reality to the world of phenomena revealed to

and therefore bring along with them the proof that there is somewhat effecting these affections, and presenting these presentments.[1]

Now this Somewhat in a world without us, giving rise to all the 'Facts' of which we are conscious in the world within us, is the MATTER of the Universe; the 'Material,' or Mother-stuff out of which are formed and fashioned all our sensations and our notions of this Universe.

And this 'Material,' or Mother-stuff, cannot consist of certain extended, measurable, ponderable, resistant molecules, however infinitesimally small, such as the 'Atoms' of the corpuscular Philosophy; for whatever has resistance, weight, length, breadth, and thickness, cannot be conceived as indivisible, but rather as divisible for ever. The real material, therefore, of the Universe must be something unextended, imponderable, immaterial (in the com-

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us by experience.' Huxley's *Hume*, p. 60. So also Lewes, *Hist. of Phil.*: 'Knowledge can be nothing more than the changes excited within us.' And Carriere, *Weltordnung*, 79–86: 'Nur meiner Selbst bin ich mir unmittelbar bewusst, und was ich empfinde sind nicht Dinge ausser mir, sondern bloss ein Leiden, ein Bestimmtsein in mir.'

[1] This point is just as certain as the former, its correlative. See Herbart, *Hauptp. d. Met.* 70: 'Presentments in the mind bring with them the assurance of simple Realities and their interaction without the mind, as causes of these Presentments. But these interactions have nothing similar to the Presentments which they cause.'

mon sense of 'material'), which stands under all phenomenal 'Matter,' and produces in the human observer the appearance and the notion of such corpuscular qualities; of which these are only, not the representatives, but the effects, the indices, the exponents, to the human mind.[1]

Such 'Material' it is which Aristotle recognises when he says: 'All things that come out into existence before us, are generated *by* something and *out* of something, and thus constituted to us something. And that Something out of which all things come forth to our cognisance, we call Matter'—i.e. in shorter words: 'The whole world of the *Becoming* (τὸ γιγνομένον) has its ground and origin in *Being* (τὸ ὄν). And again: 'All things which unfold themselves to our senses have MATTER as the ground out of which they unfold themselves. For it is *possible* for each of such unfoldings to be or not to be (i.e. to come into our field of vision as a phenomenon, a something, or to recede out of it); and this *possibility* (of appearance and disappearance before us) constitutes the *Matter* of each.'[1]

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[1] See Fiske, *Darwinism*, p. 63: 'By "reality" in philosophy is meant "persistence irrespective of particular conditions," and the group of phenomena constituting (e.g.) a table persists only so far as it is held together in cognition. Take away the cognising mind, and the colour, form, position, and hardness of the table at once disappear. That *something remains we may grant*, but this something is unknown and unknowable; it is *certainly not* the group of phenomena constituting [to our perception] the table. This great truth, established by Berkeley, is the very foundation of modern scientific philosophy, and, though it has been misapprehended by many, no one has ever refuted it, and it is not likely that any one ever will.'

Such 'Material' also Mr. J. S. Mill must mean when, consciously or unconsciously repeating the view of Aristotle,[2] he defines Matter 'the permanent *possibility* of sensation'; that Something always stable, whose presence renders *possible* our always fluctuating sensations.

Such 'Material' Mr. Tyndall must have in mind when he confesses that 'the definitions of Matter given in our Text-books are intended to cover its purely physical and mechanical properties, i.e. to sum up the purely physical and mechanical *forms* which it occasions in our minds'; and affirms that 'Matter is at bottom essentially mystical and transcendental.' And of such 'Material,' mystical and transcendental (not, however, of *that* Matter in the vulgar notion of it 'which has been hitherto covered with opprobrium'), he might truly have said: 'I prolong my vision backward across the boundary of the *experimental* evidence, and discern therein the promise and potency of every form and quality of life.'

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[1] Aristotle, *Met.* vii. 7. See the Texts in Appendix, Note XIV.

[2] For Aristotle's 'Matter' is simply 'the *Possibility* of *becoming* such and such Form.' See Huber, *Forschung nach der Materie*, p. 7.

For such 'Material,' mystical and transcendental, is that to which Leibnitz has given the name of 'Monads'; Herbart, that of 'Realities'; Noiré, that of 'Mona'; Haeckel, that of 'inorganic matter'; and Carlyle that of 'the Eternities and the Immensities'; 'the real *being* of whatever was, and is, and will be, now and for ever.'

Nor let it be objected that for this 'mystical and transcendental' Material, as the ground and origin of all phenomenal 'Matter,' we have, after all, only a logical certainty. For logical certainty is the surest of all certainties. The evidence of the senses every one has learned to distrust; the evidence of reason every one is learning to trust more and more. Our certainty of what is 'given' in experience, may be called in question; it changes from age to age, from experiment to experiment. Mistaken observations obliged Newton to lay aside his Theory for years. But our certainty of what is inferred, from well-established premisses, by rigid ratiocination, remains unquestionable. No one, for instance, doubts concerning the law of gravitation. Every astronomer is satisfied that the stars are moving onward towards a point in the constellation Hercules, though no one has seen this point, or expects ever to see it. Our certainty in such matters is, indeed, simply the certainty of logical inference from observed premisses; of reasoning onward from what is seen to its correlative unseen. But the sufficiency of such reasoning is expressed by us in the very formula which registers its results: 'If the seen *is* so and so, then its correlative unseen *must be* so and so.' The visible Premiss may be open to doubt; it may require verification; we introduce it with an 'if'; but the invisible inference, when that premiss is sound, is open to no doubt at all; there is no 'if' there; we say, 'It *must* be so.'[1]

Now just this logical certainty it is on which depends all steadfast Faith—which itself is Faith. For Faith is no mere surmise, impression, feeling; it is logical conviction; it is the assurance that, certain data being 'given,' certain corresponding conclusions *must*, of rational necessity, follow from them. 'Faith is the conviction of things not seen';

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[1] See Herbart, *Werke*, i. 563: 'All philosophical conviction is grounded on the perception that the thought itself includes in it *the impossibility of its contradictory*. On this rests all Metaphysics.'

On the sufficiency of *Inference* to carry us beyond the visible and verifiable, see Appendix, Note XV.

the certain knowledge that the visible in all its extent and to all its depth (*τὸ βλεπόμενον*), is but the manifestation of the invisible; that all our perceptions have their origin in the imperceptible; and the whole world of sense is the outcome of a world transcending sense.[1]

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[1] Hebrews, xi. 1–3. See Appendix, Note XVI.

CHAPTER IV.

MOTION.

THE first Problem which the questioning of Facts brings up before us is that concerning Matter. And we have seen how, after a series of attempts to solve this Problem, the school of Naturalists has travelled onward from their favourite 'Atoms' to take refuge in the notion of 'Force,' and 'Centres of Force.'

Yet this notion of 'Force' not only fails to tell us what Matter is (for Force is after all only a quality of Matter), but involves the additional mistake of intruding into that First Problem concepts which belong properly to the present one. The First Problem came upon us through the consideration of those *concomitant* impressions on our sensitivity which beget in us the notion of Extension, and so lead to the question of Matter. But the notion of Force is suggested by an altogether different class of Facts;—those *consecutive* impressions which produce in us a sense of Change, and so raise the question about Motion. 'Experience, both individual and collective, shows that every organism is continually altering by minute and imperceptible changes';[1] and hence arises the question, What occasions these changes? And the 'doctrine of Force' is one of the answers to this question about Change.

Now such a question is met by Parmenides with the simple denial of any real Motion. 'We need not ask the cause of Motion, for Motion there is none. What appears such is mere illusion. True Being is always like itself, and therefore always exempt from all change. It is one; while Motion would intrude upon it plurality.'[2]

Anaximander, on the contrary, assumes perpetual Motion as an original and ultimate fact. 'As there is no beginning to formless matter (*τοῦ ἀπείρου*), so neither to the Motivity which changes this indistinction into definite forms. An eternal aboriginal Motivity, ever stirring up the stagnancy of unfashioned matter, churns this into distinct determinate shapes. And from the condensation of these shapes arise innumerable worlds.'[1]

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[1] Knight, *Nineteenth Century*, Sept. 1878.

[2] See Plato, *Theæt.* 180 E: *ὡς ἕν τε πάντα ἐστὶ, καὶ ἕστηκεν αὐτὸ ἐν αὑτῷ, οὐκ ἔχον χώραν ἐν ᾗ κινεῖται.* And Ueberweg, i. 57.

Empedocles asserts that true being is not one, but manifold; an aggregate of several elements; and that change results from the varying relation of these several elements to one another. Their normal relation indeed, as one of harmony, excludes the notion of change; but when this normal relation was disturbed, and Discord sprang up, then therewith sprang up change; and from the internecine strife of the primitive particles which are not visible, come all the changes which to us are visible.[2] Here, however, Empedocles does not see that he has begged the question, and explained a fact by an antecedent identical fact. For 'varying relations' are themselves changes, and cannot therefore be adduced as the cause of change. And the 'springing up of Strife' is, also, itself a change in the normal condition of the elements, and so provokes the renewed inquiry: 'Whence, then, comes this change?'

Heraclitus, however, sees the cause of Change, not in the mere relations of the elements, but in the essential character of these relations themselves. Change is the primitive, normal condition of the elementary Matter. For since this Matter he regards as Fire, Fire by its very nature involves an unceasing Motivity, which is ever transforming all things from identity into diversity, and from diversity back again into identity. Working by the law of contraries, it produces the harmonious movement of the world, in the same manner as Music is beaten out by the scraping of the bow upon the lyre. Concord is thus begotten out of discord, and Strife becomes the mother of all things.[1]

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[1] See Simplicius, in Ritter and Preller, § 18: *τὴν γένεσιν ποιεῖ, ἀποκρινομένων τῶν ἐναντίων διὰ τῆς ἀϊδίου κινήσεως.* Where we have an anticipation of Haeckel's paradox of 'Spontaneous generation of organic out of inorganic matter.' *History of Creation*, i. 75.

[2] See Ueberweg, i. 60–62.

But Democritus and the Atomic School, true to their determination to keep themselves entirely within the boundaries of the world of sense, and to admit no explanation of phenomena not derived from these phenomena themselves, fall into the same absurdity as Empedocles, and assign for the cause of change, Change. They ascribe the movements of these Atoms to their 'eternal falling through infinite space,' i.e. to eternal antecedent movement. And this eternal falling of heavier Atoms upon lighter ones, produces lateral movements, and whirling movements, out of which emerge the worlds. The question is, Whence comes Motion? and their answer tells us, 'Out of Motion'! 'The cause of movement is a previous movement.'[1]

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[1] Πάντα κατ' ἔριν γίγνεσθαι.

But such an answer only calls up the ever salient question, 'Whence, then, this previous movement?' Does it spring *up* within each Atom? Or does it spring *on* from one Atom to another?

If you answer, 'It springs *up* within each Atom,' then this 'springing up' is itself a movement; a change from one condition of the Atom to another, and such change renews the question, 'Whence does it come?' To which you can answer only, 'From some prior movement.' But, then, 'This prior movement, whence comes that?' And so on without end.

If, instead, you say that the Movement springs *on* from one Atom to another, you are still no better off. For this act of 'springing *on*' is itself, again, a movement; a change in the condition of the Atom which makes the spring; and therefore only renews the question, 'Whence such movement?' Comes it from the 'springing on' of yet another Atom on this antecedent Atom? But then, if this be so, it comes from a movement in that other Atom; concerning which the question now recurs, 'Whence, then, *that* movement?' And so on without end.[1]

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[1] Saigey, *Physique moderne*, p. 12: 'La cause d'un mouvement, c'est un autre mouvement,' which is precisely the mistake against which we are warned in Heb. xi. 3: 'Things seen are *not* begotten by things seen, μὴ ἐκ φαινομένων τὸ βλεπομένον γεγονέναι.' Lange tells us that 'Democritus constantly *tested* (?) his theory of the atomic movements by picturing it to himself in the forms of sense.' Which shows that the theory is a pure offspring of the sensual imagination. Sense explains sense, and the explanation is *tested* by sense! See further in Appendix, Note XVII.

To meet this impossibility of finding the cause of movement in the moving Atoms themselves, modern Naturalists have invented an ocean of Ether, in which the corpuscular Atoms swim, and by which they are moved. But this is only a pushing off the problem from grosser molecules to more refined ones. For (as we have already seen) 'ethereal' Atoms are only sublimates of the corpuscular. And moreover, in these ethereal Atoms just as much as in their grosser brethren, you have still to account for the commencement of any change. And hence the inevitable question recurs, 'Whence comes this commencement?'

This leads to a further device. We must seek for the origination of movement, not in Atoms themselves, whether corpuscular or ethereal, but in 'Forces' acting on these Atoms. But here we land ourselves in a mere abstraction.[1] Du Bois Reymond rightly maintains that 'Forces' are as much impersonations fashioned by our own fancy as were the now superannuated 'divinities' of ancient mythology. 'Forces' are nothing in themselves; they are simply the *forceful acts*[2] of each elementary particle to preserve itself from the aggression of all other particles. Of such elementary particles the universe consists—primitive units of being which in their self-affirmation against each other put forth the conservative 'Force' that makes itself known to our apprehension in the forms of Extension and Motion. 'The real,' says Fechner, 'consists in the power of self-affirmation (sich selbst zu setzen) in relation to others; to take its own place and maintain itself therein, by driving back whatever seeks to occupy at the same moment this place.'[1] And the Atoms of the Physicists, when you come to examine them, are, after all, metaphysical conceptions of such ultimate Realities. For 'no one has ever seen or touched an Atom. We only *infer* their existence as the best hypothesis for explaining Nature; just as we assume mathematical points as the best way of explaining Appearance. When, therefore, Naturalists talk of "Atoms," they overpass the region of "the given" and of "Facts," and ground things seen on things not seen.'[2] So that 'Force' as the forceful act of such elementary particles 'is only a certain conditional *effect* of an unconditional cause; only the relative, which indicates to us an absolute by which it is produced. So inevitable is transfigured *Realism*!'[3]

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[1] See further in Appendix, Note XVII.

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[1] See Noiré, *Monistische Gedanke*, 63–70: 'Force is a pure abstraction, the visible form of an invisible Reality that feels and moves. There is in such statements a perpetual confusion of Becoming with Being; of abstractions with Realities. To say "there is nothing but Forces" is as if the Economist should say "there is nothing but 'values,' 'prices.'" It is a putting of the exponent in the place of the *things* expounded. For, as beneath your "prices" lie the *things* priced, so beneath your "forces" lie the things which exhibit force. There is no more substantiality in "Force" than in Light and Heat. All are equally manifestations, exponents, activities, results, of Substance.' Add Appendix, Note XVIII.

[2] See Gladstone, in *Nineteenth Century*, March 1879. 'Of Homer's ὄβριμος, Damm alone includes in his definition the idea of strength in connection with *impact*. Herewith agrees eminently the word "forceful."'

And the necessity of admitting this absolute Reality, which stands unshaken by Mr. Clifford's counter-opinion,[4] is admirably shown by Bishop

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[1] See Carrière, *Die Weltordnung*, p. 30.

[2] *Ibid.* 31.

[3] Spencer, *First Principles*, 1 ed. 236. Add Appendix, Note XIX.

[4] In *Lectures and Essays*, i. 292.

Goodwin in his profound paper on the Unity of Nature,[1] wherein he argues that just as 'to determine the orbit of a particle about a given centre of force, the mere assignment of the *law* of force is not sufficient,' so, 'granting that all living things have been developed according to some law, this does not give us all the elements necessary for the solution of the life-problem. For it is necessary to know also the conditions of *projection*, the *initial circumstances* of motion or development. A quantity of protoplasm, with an assumed power of development, will not account for existing forms of life, without the additional hypothesis of some *causative power* to determine the initial circumstances.'

This reasoning lays bare a fundamental flaw in Spencer's whole doctrine of evolution. For that seems to overlook this indispensable causative power. Yet how, from a perfect homogeneity of primitive atoms, can any change take place, in the absence of some primordial influence which already tends to heterogeneity? And how, therefore, can Mr. Spencer get the very first start in his process of differentiation without assuming this initial cause?[2]

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[1] *Nineteenth Century*, Nov. 1879.

[2] See Guthrie, in *Mind*, Jan. 1880.

For such initial cause, then, as a last resort, recourse is had by many, from 'Forces' up to 'Laws.' 'The Laws of the Universe constitute its moving powers.' But how can 'Laws' be Powers ?[1] They are but determinations of the way in which Powers shall act. They lay down a certain course of action, a method of procedure, a certain path along which Powers are to move. And all these words, 'determinations,' 'a course of action,' 'a method of procedure,' have no meaning but as indications of a Will (and that too an intelligent, selective, deciding Will) by which this path is chosen, this course of action settled, this method of procedure upheld, these Laws are originated and maintained.

Thus, then, we are brought, in this Second Problem, about Motion, as we were brought in the first Problem, about Matter, up to the borders of the Inscrutable.[2] We have reached our horizon; the limit of our range of mental vision. Things *are*;—behind all successive appearances, beyond all human ken—of this we have satisfied ourselves. But *what* they are, *how* they are, *whence* they are, it is not given us to know. In like manner Motion *is* ;—there is an ever active Life in these Things that are—a Life according to rhythm, reason, and law. But *what* this Life is, *how* it is, *whence* it is, we know not. The simple conclusion from the whole Problem is that of Aristotle: 'There must be a Somewhat which, itself immoveable, originates all movement; and this somewhat absolutely IS, and is eternal, and is "Motivity,"[1] or Life.'[2]

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[1] See Caro, *Idée de Dieu*, 382: 'Une loi, une formule, la nécessité mathématique, rien de tout cela n'est *un être*.'

[2] 'Having thus exhausted Physics and reached its very rim, a mighty mystery still looms beyond us. We have, in fact, made no step towards its solution.'—Tyndall.

And what is this but the conclusion of that Sacred Wisdom of which Aristotle was one Hierophant? The wheels within wheels which regulate all the changes in the universe 'move as the living creatures move'; and the living creatures move as *the Spirit of Life* moves them. 'Whithersoever the Spirit goeth, thither does their spirit go, for *the Spirit of Life* is in the wheels.'[3]

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[1] See Aristotle, *Met.* xii. 7 (according to Bonitz's emendation approved by Ritter): *Ἔστι τοίνυν τι καὶ ὃ κινεῖ · ἐπεὶ δὲ τὸ μὲν κινούμενον καὶ μὴ κινοῦν, τὸ δὲ κινούμενον καὶ κινοῦν, καὶ τρίτον τοίνυν ἔστι τι ὃ οὐ κινούμενον κινεῖ, ἀΐδιον, καὶ οὐσία, καὶ ἐνέργεια οὖσα.*

[2] *Ἡ γὰρ νοῦ ἐνέργεια ζωή.*—*Ibid.*

[3] Ezekiel i. 20, 22.

CHAPTER V.

MIND.

WE live in a world of appearance. The sum-total of what are called Facts is made up of the appearances which by means of our senses are raised in our consciousness and modified and multiplied by our mental activity.

But we have seen that these appearances come before us in three aspects: *concomitantly*, in the form of Extension, which, when we search into it, leads to the Problem concerning Matter; *consecutively*, in the form of Change, our examination of which lands us in the Problem concerning Motion; and *co-ordinately*, in the form of *adjusted* extension and change, which involves the Problem concerning Mind.[1]

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[1] How naturally human thought falls into this Triad! See Antoninus, xii. 32: 'How small a part of the universal *Matter* (τῆς ὅλης οὐσίας) is parcelled out to us; how small a part of the universal *Motion* (τοῦ ἀπείρου αἰῶνος); how small a part of the universal *Mind* (τῆς ὅλης ψυχῆς)!' And again xii. 10: 'Ascertain

For the notion of Mind emerges whenever we observe appearances not simply co-existent, or in succession, but in *correspondence* each with all as of parts to wholes, or means to ends.[1] For such correspondence between appearances is their proportionateness ; and proportion is Ratio ; and ratio means Reason ; and 'Reason is but choosing';[2] and choosing is intelligence (*inter lego*) ; and intelligence is what we mean by Mind. Wherever, therefore, we discover such correspondences in the sphere of the individual (the microcosmos), we infer from them the presence, in this individual, of Mind. And by parity of reasoning, it is because we discover similar correspondences in the sphere of the universe (the macrocosmos) that we infer the presence, in this universe, of Mind. So this question about Mind resolves itself into two particulars : Mind in Man, and Mind in Nature.

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what things are in themselves ; dividing them into Matter (ὕλην), Motion (αἴτιον), and Mind (ἀναφορὰν)'; for ἀναφορὰ = relation to a purpose = ratio = Mind. And again, xii. 18 : 'In everything ascertain what it is which produces in you a presentment (τὴν φαντασίαν), and discriminate it into Matter (εἰς τὸ ὑλικὸν), Motion (εἰς τὸ αἴτιον), and Mind (εἰς τὴν ἀναφορὰν).'

[1] See Haeckel, *Hist. Creat.* i. 184.

[2] Milton, *Areop.*

I. MIND IN MAN.

Of this there are presented to us the clearest evidences, in all men, through all the history of man. Discrimination, preference, corresponding purpose—i. e. Choice, and action in accordance with Choice—are universal characteristics of human nature. Men never vegetate in perfect indifference;—they *choose* some things rather than others. Men never act entirely at random; they *choose* one sort of action rather than another. They have motives (i.e. reasons for determination), whether explicit or implicit, for all they do. They eat because they are hungry. They sleep because they are weary. They work for wage. They play for pleasure. They are incessantly stretching towards some goal, immediate or distant, clearly or dimly seen. The very changes in us which seem the most capricious have their meaning, their hidden ground. Wilfulness is only shrouded reasonableness. Nay, in matters in which we seem the most passive, worked upon instead of working, whatever we receive is modified by our own activity; and modified in accordance with inward similarities and dissimilarities, inclinations and disinclinations, desires and aversions, continually at work. We admit things to be true, according to our personal judgments touching likeness and unlikeness; we hold them to be proper, according to our personal judgments of approval and disapproval; we desire them as beneficial, according to our personal judgments of advantage or disadvantage. Every thought thrown into the machinery of our minds is laid hold of, carded, rearranged, knit up with thoughts already in us, woven into the existing texture of ancestral, national, individual tendencies, tastes, prepossessions, purposes, plans. This personal inweaving of whatever is brought before us is what Epictetus calls 'the working up of our presentments,'[1] and notes as 'the proof of a somewhat within us stronger than these presentments and having mastery over them, which we owe to God alone.'[2] And wherever we see such an operation going on we recognise the presence of Mind. Its first dawn in the infant we hail as the dawn of Mind. Its absence in the idiot we bewail as the absence of Mind. Its deficiency in the dull we note as want of Mind.

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[1] *χρῆσις ταῖς φαντασίαις*, which Long renders unintelligibly 'the use of appearances'! Courdaveaux, 'l'emploi des ideés.' Berkeley describes it as 'the exercising divers operations on our ideas, or objects of knowledge.' *Princ.* § 2. This 'operation' is as the active *Mill* to the passive material thrown into it.

[2] Epictetus, i. 1: *τὸ κράτιστον ἁπάντων καὶ κυριεῦον, οἱ θεοὶ μόνον ἐφ' ἡμῖν ἐποίησαν.*

Mind, therefore, implies the perception, supervision, and control of a set of thoughts in our consciousness by another set of thoughts beneath our consciousness. And more; it implies 'a perceptive Centre' out of which the perceived thoughts emerge into consciousness, to which these thoughts present themselves, by which they are judged of and controlled, and in which the percipient thoughts have their seat. And this perceptive Centre is that 'unknown some *Thing*' which even Hume, though grudgingly and obscurely, admits, when he says, 'We have no other idea of substance than as an aggregate of particular qualities inhering in an unknown *Something*';[1] which Mr. Bain contends for when he says, 'Whenever intelligence is concerned with any thing as an object, it must, as the ground or condition of its knowledge, have some cognisance of a *Subject*'; and concerning which Lotze affirms, 'Every the simplest sensation bears testimony to a Subject sensible of this sensation, as a manifest *Fact*.'[2] And this *Fact*, thus present to us in all sensations, and constituting the *Subject* to which all objects point, is what we mean by Self,—our Self; what Bishop Butler terms 'the living Being which we call our Self.'

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[1] As quoted by Huxley, *Hume*, p. 175.

[2] Lotze, *Metaphysik*, 477: 'Nirgends kommt eine blosse Empfindung ohne Subject, als eine Thatsache vor.' So that each man is to himself the first of all *Facts*, inscrutable, incomprehensible, yet not the less a *Fact*. I know my Self as a Fact; and in *knowing* my Self as a Fact, I know my Self as a *knowing Fact*, a self-conscious Fact.

But just this Self, and no other than this Self, is what we indicate by that equivalent term 'Soul,'—our Soul. Such as Plato affirms when he declares, 'There cannot be mind without a soul.'[1] And Berkeley, when he maintains: 'Besides the endless variety of our ideas, or *objects* of knowledge, there is likewise *Something* which knows or perceives them; and this perceiving, acting Being is what I call Mind, Spirit, Soul, or *Myself*. By which words I do not denote any one of my ideas, but *a Thing wherein they exist*,—a thinking Thing.' Nor need we any long array of testimonies to show with what persistency this notion of a Self, or Soul, has from the very first been maintained.

Thus in the Vedantas we are told that 'the Self is he who uses the senses, yet is distinct from them; he who perceives by means of the eye, himself the Seer; he who, when knowing, knows that he is himself the Knower; he of whom the mind itself, the inward eye, is but the instrument.'

Next, the Pythagoreans regard the Soul as a particle of the primitive Fire which animates all things, which, so far from being a product of the body, is for a time imprisoned in the body, and thence takes flight into another dwelling place.[1] Thus Philolaus says: 'The soul is linked on to the body as a punishment, and lies buried in it as in a tomb.' And again: 'The soul is put into the body to use it as its instrument, seeing that through this only can it exert its perceptive power; but when this connection is severed by death, it carries on a disembodied life.'[2]

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[1] *Philebus*, 30 c.: *σοφία μὴν καὶ νοῦς ἄνευ ψυχῆς οὐκ ἄν ποτε γενοίσθην.*

So even the Atomists. Leucippus makes the Soul the noblest part of man, the actuating centre for the body in which it dwells.[3] And Democritus declares the body to be no more than the vehicle of the soul, deriving from it all its movements.[4]

And when we come to Plato and his followers, we find this 'noblest part of man' brought out as solely the man. For, 'the body is not the man, nor is man a compound of body and soul. It remains, therefore, that he must be either nothing at all, or else no other than simply Soul. The Soul is the man.'[1]

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[1] Whence their phrase *σῶμα σῆμα*. Ritter is therefore wrong when he represents them as teaching 'anima *effectus* corporis,' p. 90 a.

[2] For the Texts, see Appendix, Note XX.

[3] See Ueberweg, i. 70.

[4] See Lange, *Hist. of Materialism*, *E. T.* i. 28; and Aristotle, *de An.* i. 2: *τὴν ψυχὴν εἶναι τὸ παρέχον τὴν κίνησιν.*

And as strongly the Stoics. 'That which originates all thought and action,' says Antoninus, 'is the somewhat hidden within us, which is life, which is the man. Never, therefore, include in your concept of man the mere vessel which contains him, or any of the bodily organs' [not, therefore, the brain] 'that are fashioned out of that vessel; for these are of no more worth without the causative principle whence originates their movement and their force, than is the shuttle of the weaver, and the pen of the writer, and the whip of the charioteer.'

All which Cicero sums up in his beautiful dream of Scipio: 'Regard your body only, and not yourself, as mortal. For that outward form is only the manifestation of your Self. The Self in every man is simply his Soul; not that mere figure which may be pointed at. Know yourself, therefore, to be divine; if by divine we mean that in us which lives, and feels, and remembers, and looks beforehand; which in short as thoroughly dominates, governs, and actuates the body of which it is made president, as the Supreme God does this world. For just in the same way as the Eternal God actuates the changing phenomena of this world, so does the immortal soul actuate its mortal body.'

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[1] For the Texts, see Appendix, Note XXI.

Yet just this substantial Soul, modern thought declines to recognise. With the same dogmatism with which the Idealist questions all objective Reality, the Agnostic questions this subjective Reality. For, forsooth, 'We must not overstep the boundaries of experience! We must deny all certainty to whatever is not apparent. We may not accept any conclusion which cannot be verified by sense. But no one pretends that Soul can be verified by sense. If, therefore, you are determined to indulge yourself in the unverifiable delusion of a Soul, you must hold it as a delusion; of no higher validity than feeling, fancy, fiction. It is a poetic figment, but not fact.'

What are the words of Professor Tyndall? 'If you are content to make your "soul" a poetic rendering (!) of a phenomenon which refuses the yoke of ordinary mechanical laws, I, for one, would not object to this exercise of ideality' (!)[1] And what is the opinion of his much-bepraised Lange? 'We must pay attention solely to the mental functions, without any sort of regard to that metaphysical phantom, a Soul, and soberly construct a Psychology without a Psyche.'[1] And what is the assertion of Mr. Bain? 'Of mind apart from body we have no direct experience, and absolutely no knowledge. The wind may act upon the sea, and the waves may react upon the wind, yet the agents are known in separation; they are seen to exist before the shock of collision; but we are not allowed to perceive a *mind* acting apart from its material companion.'[2]

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[1] *Birmingham Address.*

On which it must be permitted us to ask, Have you ever 'seen' the wind, except in its *effects* upon the waves and other objects that it influences? Nay, have you ever 'seen' the component particles of those waves which receive these influences? These 'winds' and 'waves' are as purely phenomena alone, as are the appearances in consciousness of mental action. And these appearances in consciousness of mental action are as patent and as certain as those phenomena of winds and waves. You do *not* know the wind 'in separation' from its effects. You do *not* know the waves otherwise than as effects from unseen causes. And with just the same right as you, nevertheless, *infer* from those effects certain unknown forces which must be producing them, may we *infer* from the appearances in consciousness a corresponding unknown force which must be producing them. Did you ever 'see' an ultimate atom of Oxygen? Did you ever 'see' the action of an ultimate atom of Oxygen 'separate from' its sensible effects? And yet you do not hesitate to speak of these atoms as matters of 'absolute knowledge'; nay, build up your whole system upon them. It is your boast to have discovered, and settled for ever, that not one ultimate atom of Oxygen, or of any other 'elementary substance' (which nevertheless you have never 'seen') is ever inactive, or can ever be lost. You claim to be entitled to speak of each and all as existing 'in separation from each other' and from their various effects. No change, you maintain, in the amount of invisible Force, whatever be the visible changes in its manifestation. Yet you are 'not allowed to perceive' any atom 'acting apart from its manifestations.' All you are 'allowed to perceive' is these manifestations and their changes, to account for which you *assume* a set of 'forces' not changing and not manifest. And of these forces you pronounce with 'absolute knowledge' that amidst all changes of their manifestations they themselves remain eternally the same.

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[1] See in *Vaihinger*, 117, 119.

[2] Bain, *Body and Mind*, 133; who may rejoice in the support of the Hindoo Heretic, Brishapati: 'Nothing exists but the four elements which, when changed by evolution into organic body, produce intelligence, just as the inebriating power is developed from the mixing of certain ingredients. The Self is only the body qualified by intelligence, there being no evidence for a Self without a body.' —Max Müller, *Hibbert Lecture*, p. 140.

How, then, can you challenge the altogether similar, and equally authorised, assumption, that to account for mental manifestations, we must accept some mental 'force,' or 'atom,' or 'elementary substance' (call it what you will) which is to these manifestations what the atoms underlying the phenomena of wind and wave are to those manifestations? Either there are no 'forces,' nor 'centres of force,' nor 'atoms,' nor 'elementary substances,' underlying any phenomena in universal nature; or else all the forces, psychical as well as physical, which these phenomena oblige us to accept, must, though we are 'not allowed to perceive them,' equally *be*, and equally, amidst all changes of their manifestations, continue to be. 'Scientific men' (it has been justly said) 'do not, in sober truth, know more of the forces which they term gravitation, and electricity, and heat, than they know of the force termed *Mind.* These designations are all names that have been devised for unknown Agencies which are recognised only through the effects which they produce. These effects are, nevertheless, in each instance, examined, and reasoned about, and the conditions and laws of their respective Agencies inferred. The metaphysical elements which Psychology deals with, are, at any rate, quite as much Realities as the imponderable fluids, invisible vibrations, infinitesimal atoms, and supersensible polarities, of the physical philosophers.'[1]

For, in our treatment of this Third Problem, as decidedly as in our treatment of the Second Problem, we must maintain that a logical conclusion, legitimately drawn from acknowledged Premisses, has all the force of rational conviction. The whole Philosophy of Facts is built upon this principle. Without this principle we can never advance one step onward from particulars to generals, from facts to causes of these facts, from appearances to Realities, from the bare 'known' to its correlative unknown. And in the case before us, the 'known' is that mass of mental facts—of thoughts, and feelings, and determinations—which make up the content of 'Consciousness,' and for which we are compelled to seek and find a seat, a base, an initiative Ground (*αἰτία*). You cannot take the phenomena which you characterise as 'mind,' and go no further. For all 'phenomena,' by their very name of mere 'appearances,' imply and demand the recognition of a correlative some *thing* of which they are the appearance. 'The mind' is but a mirror along which pass, incessantly, ever changing images. It obliges us therefore to admit, for the explanation of these images, not only a somewhat which produces them (objective Realities in Nature), but a somewhat which receives them (a subjective Reality in ourselves). Else would these images never make appearance.[1]

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[1] *Edinb. Rev.*, Jan. 1879. Compare Huxley (*Hume*, 52): 'The Positivists assert that observation of the mind is a thing inherently impossible, and that Psychology is a chimæra. Nevertheless, if M. Comte had been asked what he meant by "physiologie cérébrale," and how he knew anything of the functions of the brain, except by that very "observation intérieure" which he declares to be an absurdity, he would have found it hard to escape the admission that in vilipending Psychology he had been propounding solemn nonsense.'

Nay, more than this. We have the Fact, not only of perception, but of *conscious* perception. And conscious perception obliges the admission not merely of a Subject to which Objects become present, but a Subject which compares, concatenates, and manipulates these presentments.

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[1] See Leslie Stephen, *English Thought*, i. 49: 'Whilst Hume was right in limiting the mind to experience, and in declaring the existing distinction of object and subject to involve an error, he was wrong in not observing that the very possibility of making the distinction *implied an operative Mind.*' And again, i. 54: 'Hume, having emptied the mind of all supposed innate ideas, and *à priori* truths, fancies that the mind itself is dissolved. But no! *the organum remains*, though the laws of its operation are revealed to us only by the experience upon which it operates.'

For, our simplest sensations are not mere 'impressions' made upon entirely passive material, like the stamp of a seal in wax; they are 'creations' originated by an ever working somewhat in concurrence with the impressions. 'A sensation is not a simple excitation of the sensory organ, but a compound of this excitation with the consequent excitation of a *perceptive Centre*.'[1] There is never merely action on us, felt; but reaction by us, put forth. No impressions that we feel, no visions that we see, no conceptions that we form, no determinations that we come to, are mere propagations of molecular movements, or of nervous vibrations; they arise from reciprocations in ourselves in correspondence with these movements and vibrations. They prove, therefore, an independent, though reciprocating, Substance, vibrating within us, as much as nervous and molecular vibrations prove similar Substances (or Atoms) which vibrate without us. So much so, that we cannot even speak of mental movements of any kind without assigning them, in the very words we use, to this moving Subject, or Substance. We do not talk abstractly of sensations, conceptions, determinations, acts, as if these were gossamer filaments floating in the air; but we instinctively refer them to a central point, in which they inhere, to which they belong, by which they are experienced, of which they are peripheral only. For we say '*My* sensations,' '*my* conceptions,' '*my* determinations,' '*my* acts.' You can no more dispense with the belief of a substantial *Self*, as the base of all the changes in consciousness, than you can think to move the world without a place to stand on. You must have a ποῦ στῶ.[1]

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[1] Lewes, *Problems of Life*, i. 131.

This is confessed even by those who seem but

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[1] 'The very first knowledge which an infant gains, the foundation of all after-knowledge, is the distinction between itself as (what is called) an Ego, and all things and persons exterior to itself. And in this idea of an Ego is included will to act or not to act. Its primary consciousness teaches as truly that its will is *Itself*, as that Itself exists.'—F. Newman, *Cont. Rev.* Oct. 1878.

Compare Tennyson, *In Mem.* xliv.:

'As he grows he gathers much
And learns the use of "I" and "me,"
And finds "I am not what I see,"
And other than the things I touch.'

It is curious to observe how Mr. Clifford, notwithstanding the wonderful clearness and beauty of his style, shuts his eyes to this 'Me Myself,' when he asserts that 'a certain cable of feelings, linked together in a particular manner, constitutes *me*. Similar cables constitute *you*. That is all there is!' * But how can this be 'all'? when the very word 'feelings' bears within it reference to *a Somewhat* which feels these feelings? For all 'feelings' are only *states*, or modifications, of a Subject, which, being thrown into too ready to countenance the illusion of man's being a soul-less conglomerate. Lange says: 'In vain does Lucretius attempt to deduce Feeling from the mere motions of the atoms, or to invent atoms of greater subtlety to explain it. With regard to these subtlest atoms the difficulty remains the same as it does for the vibrating filaments of La Mettrie. How can the motion of a body which is itself non-sentient, be sensation? *Who* is it then that *is* sentient, *has* sensation? And how does this sensation come about? And where? To these questions Lucretius gives no answer.'[1] And Mr. Tyndall has reasserted at Birmingham, with his

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* Clifford, *Lectures and Essays*, i. 290.

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vibration therewith feels. 'Cables of feeling' become felt, not by the strands themselves of which they are composed (any more than our afferent nerves feel the tremors they convey), but by *the Operator* to whom they conduct the electric shocks. And these feelings cannot '*constitute* me,' because they are feelings *of* me, belonging *to* me, occurring *in* me. They do not therefore *constitute* me any more than 'my hands which I put on the table' (255) constitute me. 'The irritation of those hands' does not make the hands themselves 'say *cloth*' (259); but makes *me* 'say *cloth*.' And it is *in addition* to what this irritation 'tells me,' that *I myself* supply, from my internal stores, the 'supplement,' to experience, which is not in the experience by itself. True, indeed, that the feelings of each new phase of experience may be said to constitute the *transient Ego* of that phase, the centre to which we refer all its radii; but they do not constitute *the permanent Ego* which is the sole seat of all experiences; and of which, as Herbart has shown, the transient Egos of each temporary phase are but the successive 'moments.'

[1] Lange, *Hist. of Mat. E. T.* i. 146. Compare Fiske, *Darwin-*

accustomed force, what he affirmed at Belfast—the utter inability of Materialism to explain the fact of consciousness. 'It may indeed make clear by physical conceptions and physical laws the phenomena of bodily life, the action of the afferent nerves upon the brain, and the counteraction of the efferent nerves. It may lay bare the approaches to the citadel, and advance through them from muscular contractions to nervous tremors, and vibratiuncles of the cerebral tissues; but between the very last point reached by such induction and Thought, and Consciousness of Thought, it finds still remaining a chasm which it cannot bridge over. It can supply no answer whatever to the question, How does the brain produce in us mental movements? and How

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ism, pp. 68, 74: 'It is not only inconceivable *how* mind should have been produced from matter, but it is inconceivable *that* it should have been produced from matter, unless matter possessed already the attributes of mind in embryo—an alternative which it is difficult to invest with any real meaning. . . . It is even clearer to-day than it was in the time of Descartes, that no possible analytic legerdemain can ever translate thought into extension, or extension into thought.' And he well shows, at length, how the doctrine of 'the correlation of forces does not alter a whit the position in which we were left by common sense before nervous physiology was ever heard of.' 'The relation between what goes on in consciousness and what goes on simultaneously in the nervous system, may best be described as a relation of *uniform concomitance*.' So that 'the modern scientific philosophy, as represented by Spencer and Huxley, not only affords no support to materialism, but condemns it utterly, and drives it off the field altogether' (74).

can our mental movements determine any action on the brain?[1] This chasm is acknowledged by all. It cannot be explained away. It remains a stubborn Fact. We can present no picture of the process whereby Consciousness emerges, whether as a necessary link, or an accidental by-product, of the series of actions in the brain. Yet it certainly does emerge; molecular action does produce mental consciousness.' And still later, Mr. Tyndall adds, apparently with reference to the view of Mr. Lewes: 'It is no explanation to say that the objective and subjective are two sides of one and the same phenomenon. Why should the phenomenon have two sides? This is the very core of the difficulty. There are plenty of molecular motions which do not exhibit this two-sidedness.

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[1] Comp. Fiske, *Darwinism*, 71–74: 'Nowhere is there such a thing as the metamorphosis of motion into feeling, or of feeling into motion. Instead of entering into the dynamic circuit of correlated physical motions, the phenomena of consciousness stand outside as utterly alien and disparate phenomena. Everybody, indeed, knows that, so long as we live on the earth, the activity of the mind as a whole is *accompanied* by the activity of brain as a whole. And nervous physiology teaches, further, that each particular mental act is *accompanied* by a particular cerebral act. In proving this, the two sets of phenomena, mental and physical, are reduced each to its lowest terms; but *not a step is taken towards confounding the one set with the other.* On the contrary, the keener our analysis, the more clearly does it appear that the two can never be confounded. The relation of *concomitance* between them remains an ultimate and insoluble mystery.'

Does water think or feel when it runs into frost ferns upon a window frame? If not, why should the molecular motion of the brain be yoked to this mysterious companion—Consciousness?'[1]

And so we come, from the consideration of Mind in man, to recognise man as Mind. It is of his essence to be, what even Lewes calls him, 'a thinking Subject,' and Berkeley 'a thinking Being' whom, because of this thinking capacity, we call a Soul, a Spirit. Mind implies a person minding. Thought, a person thinking. Discrimination, comparison, judgment, choice, determination, a Person who discriminates, compares, judges, chooses, determines. You cannot have the ever varying appearances without a corresponding *Base* for these appearances. And with just the same right and the same validity with which the Chemist reasons onward from the phenomena of water to an 'elementary Substance' generative of water, which he calls 'Hydrogen'; so may we, and so must we, from the phenomena of Mind reason onward to a corresponding 'elementary Substance' which is generative of Mind, and therefore may be termed by a just analogy 'Noerogen.' For as all appearances, universally, must have for their Base corresponding Realities, and from the kind of the appearances we must conclude to the kind of their corresponding Realities, so, in this particular case, from the kind of phenomena observable in consciousness we must conclude to a similar kind of Base for these phenomena; that is from Mind to Soul; from spiritual manifestations to a Spirit in man.[1]

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[1] Tyndall, in *Nineteenth Century*, Nov. 1878. He does not notice the confusion, in Lewes's formula, of speaking about 'a phenomenon with two sides.' The objective and subjective are not two sides *of a phenomenon*. They are two phenomena of a non-phenomenal, underlying, *Reality*. The presentments in my consciousness I refer *objectively* to Realities which are *not me*, as the *occasion* of their appearing in me; and *subjectively* to a Reality which *is me*, as the *cause* of their appearing in me. See W. James, in *Mind*, July 1879: 'We find two primordial natures, the molecule of Matter and the molecule of Mind, coupled by an empirical law. Phenomenally incommensurable, the attempt to reduce them to unity by calling them two "aspects" is vain, so long as it is not pointed out who is there *adspicere*.' And again: 'The "double aspect" school postulate the blank form of "one and the same Fact"; appeal to the image of the circle which is both convex and concave; and think that they have by this symbolic identification made the matter seem more rational!' For additional Authorities, see Appendix, Note XXII.

II. MIND IN NATURE.

On the very threshold of this question we are met by two astounding statements—the one, that the Mind supposed to be observable in Nature is no more than the reflex of our own, the observer's, mind. The other, that there is really no mind observable in Nature, but, on the contrary, an unconsidered, unintelligible, play of mingled Chance and Necessity.

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[1] See Noiré, *Monist. Gedanke*, 62: 'The one thing for which we are most indebted to Leibnitz is his maintenance, against Spinoza, of *Individuality*. For Individuality is the most limpid, clear, and unquestionable notion we possess. No one has any doubt about the existence of his *Self*, and the distinction of this Self from all other existences. The very word "Monad" implies exclusiveness.'

First, we are told that the Mind which we seem to find in Nature is but the reflex of our own, the finder's, mind. What we call correspondences, and adjustments towards definite ends, are not really presented to us by Nature, but bestowed by us upon Nature. We are, in this respect, just the opposite of the Chameleon; we do not take our colour from the things surrounding us, but we give our colour to these things. Whence the sarcasm of Comte, that the heavens declare the glory, not of God but of Sir Isaac Newton.

But this assertion includes a double falsehood: first because Newton did not invent out of his own mind, but only discovered, in the facts of Nature, correspondences and laws already in operation long before him; independent of his observation, and remaining the same when he was gone. And next because this discovery, however much the offspring of his own mind, could have become such offspring only because this mind of his was attuned to the mind in Nature, and its utterances were resonant of that. ‘The possibility of all science by man, concerning what is not man, lies in this; that he is not merely part of the whole, but that the universal principle which gives unity to the whole *manifests itself in him.* It is because “Nature becomes conscious of itself in man,” that man, in his turn, can read the open secret of Nature.’[1]

Then next we are told that in real fact, Nature not merely fails to suggest the residence in her of Mind; but shows a deplorable want of mind. While man acts on calculation Nature acts by chance. Destruction of the seeds of life; failure to complete what has been begun; variation from type; contradiction of imagined purpose; these constitute the Rule and not the exception in Nature's doings. Her mode of procedure has no similarity with that of human contrivance.[2] What we call ‘natural development’ is as rare in all her works as in man.

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[1] Caird, *Cont. Rev.* July 1879.

[2] See Lange in *Vaihinger*, 113: ‘Heutzutage ist festgestellt (!), dass ihr Verfahren mit menschlicher Zweckmässigkeit keine Aehnlichkeit hat. Sie gebraucht vor Allem den Zufall als Vermittler, im Gegensatz zu der menschlich berechnenden Intelligenz. Der Untergang der Lebenskeime, das Fehlschlagen des Begonnenen ist die Regel, und die sogenannte “naturgemässe” Entwickelung ist auch in der Natur (nicht nur in der Menschenwelt) ein Specialfall unter Tausenden. Der Zufall ist ein mächtiger Factor in der Entwickelung der Organismen.’

And even if it be urged that the very constitution of the atoms, and the laws of their interaction, include the presence of a general plan of development, still this general plan cannot be traced in the details; for these exhibit nothing more than the necessary mechanical consequents of fixed mechanical antecedents.[1]

Yet such thinkers clamour for a Philosophy of Facts. Whereas Facts, as they present themselves both in gross and in detail, give every evidence possible of Mind in Nature working similarly as Mind works in man: adjusting all things each to each, in orderly conjunction; developing all things each from each, in orderly succession; and actuating all things each by each, in orderly co-operation towards beneficial ends.

1. Facts bring before us endless testimony of Mind in Nature *adjusting* all things each to each, in orderly conjunction. For everywhere we meet with occurrences not thrown about at random but linked together in what Haeckel calls organic unity. For 'an organism' (he says) 'is composed

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[1] 'Ausserdem muss man annehmen, dass schon in der Constitution der Atome und der Weltgesetze das Ziel irgendwie angelegt sei; . . . man kann und darf die *ganze* sinnliche Welt für etwas Geistiges erklären, aber man darf nicht *einzeln* in ihren Kreis geistlichen Ursachen hereinbringen, welche ihre in sich festgeschlossene mechanische Causalreihe durchbrechen.'—Lange, *Vaihinger*, 115.

of various parts *fitted in* to each other like the different parts of a machine, so as to produce the action of the whole.'[1] And everywhere in these organisms we discern the presence and influence of general laws; the law of continuity, the law of correlation of forces, the law of persistence of energy, the law of equivalence of power. Nor less so in the minutest particles of Nature than in its greatest masses. 'A single cell is a closed vesicle, or bag, having a cavity which contains matter of variable consistence; and *every such cell constitutes an entire organism.*'[2]

And further, not only in all organisms great or small, but in the elementary particles of which they are composed, Adjustment reigns. 'Each chemical atom is a very complicated structure; an atom of pure iron being probably a more complicated system than that of the planets and their satellites; so that each of these particles is (as Sir John Herschel has beautifully said) for ever solving differential equations which if written out might belt the earth.'[3]

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[1] Haeckel, *Hist. of Creation E. T.* i. 184.

[2] Carpenter in Lewes's *Comte*, 176. And again p. 156: 'Hear Mulder: "The cell is a concave globule. The concave globule is an individual which possesses all the powers of its molecules united into one whole, . . . in a state of mutual combination, co-operating for one end."'

[3] Jevons.

Nor is this all. 'The various powers under which the forces of Nature are made manifest have all *one common origin*; or, in other words, are so strictly related to each other that they are convertible into each other, and possess equivalence of power in their action.'[1] That is, we have evidence not only of Mind in all things, but of such Mind radiating, as from centre to circumference, adjusting not exclusively the internal relations of each particle, but the external relations of each to every other, and to the complex whole.

This perfect unity in infinite diversity was recognised as early as Xenophanes. 'Wherever I turn I find all things, however various, still one; making up one Whole.'[2]

Nor was this truth less affirmed by Heraclitus; for his primitive 'Fire' was instinct with reason, and 'all things through participation of this reason are actuated as by a common mind, which regulates the administration of the whole.'

So, similarly, Anaxagoras is not satisfied, like modern thinkers, with ascribing motion to antecedent motion without end, but places as the initiative of all change an originative Mind. 'When all things were commingled in one stagnancy, Mind brought in upon them movement, and therewith differentiation.' 'All things whatsoever, be they past, or present, or to come, are adjusted by the intervention of Mind.'

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[1] Tyndall, *Birmingham Address*, Oct. 1877.

[2] For the Texts, see Appendix, Note XXIII.

And every one knows how, in Plato and his school, this recognition of Mind became a settled article of faith. 'On this point there is a consent of all wise men when, doing honour to the mind which is in man, they acknowledge a similar Mind pervading heaven and earth. For can we possibly conceive the universe enslaved to unreasoning Chance? Must we not rather agree with those who have gone before us in admitting a certain marvellous Intelligence which marshals all things into place and order? Mind it is, most certainly, which proportions into beauty all things. Mind is for ever Monarch of all.' (Phileb. 28 c. d.)

Nor are the Stoics ever tired of expatiating on this theme. 'All things are woven closely together into a sacred web, so that no thing is foreign to any other thing. For all are so marshalled together as to proportion into beauty the whole world. Hence one universe, made up of all things; and one God, diffused through all things; and one substance, and one law, and one common reason in all intelligent beings, and one truth.' (Anton. vii. 9.)

2. But, next, Facts testify to Mind in Nature as not only adjusting all things, each to each, in orderly conjunction, but *developing* all things, each from each, in orderly succession. For the world is not simply an organism, but an ever-growing organism, unfolding itself through successive differentiations and integrations, both of structure and of function, into ever higher forms. It has a history. It is going through a process of continuous evolution, from the simplest germs to the most complex products; from the Bathybius up to man. And such a history shows the continuous presence and operation of Mind.

With what delicate mockery does Plato indicate the folly of overlooking this, when he says: 'Judge of my disappointment when I found that my author made no use of *Mind* as originating all the movements which adorn the world, but referred us to atmospheres, and ethers, and fluids, and the like! Which seems to me as if any one were to assign, as the cause of my sitting here, that my body is composed of bones and muscles; that these muscles can be stretched, and thus stretch along with them the bones; that thence I can move my legs as you see I am doing; and that *all this is the cause* of my sitting here!'[1] (Phædo, 98.)

And so the Stoics: 'All the ways of God are full of purpose. Even what men call Chance is but a product of Nature; that is, of the intertexture and interaction of things prearranged by Providence. For all things flow from this.' (Anton. ii. 3.)

Again: 'The universe delights in nothing more than making one thing grow out of another; in bringing new out of old. For, every thing that exists at any moment is the germ of similar things to come. The mystery of birth is not confined to animals and plants. It pervades all Nature.' (iv. 36.)

Again: 'The world is a Whole; of one substance and one spirit; and all the movements of this whole act upon one Sensitivity, and are reacted on by one Activity; and every particular movement has its origin in the combined movement of this Whole. So close is the intertexture of each with all, and all with each.' (iv. 40.)

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[1] What a rebuke here, by anticipation, of modern babbling about muscular contractions, nervous vibrations, and brain power; which no more reaches the true *αἰτία* of human action than the fullest exposition of the distributive parts of a machine, while you suppress all notice of the motive power distributed!

For the Texts, see Appendix, Note XXIV.

Again: 'Whatever takes place is intimately joined on to what has gone before it. For the connection of things in Nature is not like that of Numerals, which, though arranged together in line, do not spring out of each other. No! As all things at any one moment have a necessary relationship each to each, so all things that follow upon these, do so not by mere succession, but as the result of a wonderful affinity.' (iv. 45.)

And again: 'Either we must allow that all things evolve themselves in regular continuity out of all, or that there is no such continuity in the largest masses of being. If there is no Mind actuating the infinitely small, there is no Mind in the infinitely great. But this Mind we see in the vaster phenomena of Nature, therefore we must believe it equally at work in every particle of the world; at work, too, through the energising of that Spirit which rules throughout the universe.' (vii. 75.)

And so unthinkable is the contrary of this belief, that Hartmann is continually contradicting in detail what he asserts in gross. He constructs his whole system on the assumption of an *unconscious* life pervading all things, and yet continually admits an *aim* in the workings of this life, spite of his theory. 'His "Unconscious" is really an "organising Unconscious." He represents the whole process of organic development as perfused by *design*. And he distinguishes his "Unconscious" from the God of Theism mainly by this; that while the latter is supposed to work, after the manner of a human artist, by means of discursive consideration, the "Unconscious" moves from within outward in virtue of an immanent aim. The idea of "aim," or "end," both in nature and life and history, forms the key to his mode of thought, and the only solvent for the problem of existence.'[1]

Haeckel, in like manner, is a marvel of inconsistency upon this point. His 'History of Creation' is a History of 'Organisms,' which he defines to be 'combinations of various organs (instruments) that work together *for the purpose* of producing the phenomena of life.'[2] And he says: 'Monism finds in the process of development the necessary effects of the *eternal laws* of nature'; and again: 'The same great, eternal, iron *laws* are active in the life of all things';[3] quite oblivious that 'laws' can be nothing but the habitual mode of action of a Lawgiver. And yet he sets out with fierce denunciation of all teleological notions, and says 'the much talked of "purpose in nature" has really no existence.'[1] This he thinks to prove by the quite exceptional instances of unused rudimentary organs; though at the same time 'Adaptation,' 'Filiation,' 'Causation,' 'Laws,' are with him leading terms![2] Nay, he speaks of 'Correlations everywhere';[3] yet will not see that 'correlation' is 'relation,' is therefore 'Ratio,' Reason, Mind! Again: 'The two fundamental instincts of organic self-preservation are Nutrition and Propagation. All the phenomena of Adaptation may be traced to the instinct of Nutrition; all those of Heredity to that of Propagation. The products of natural selection are arranged even more *for a purpose* than the artificial products of man; and yet they owe their existence, not to a creative power acting for a definite purpose, but to a mechanical relation acting unconsciously and without a plan.'[4] Where we have 'things arranged for a purpose,' yet 'acting without a plan'! His very terms, which he cannot but employ, are recalcitrant against the views for which he employs them. Human speech repudiates his sophistry: 'A *mechanical* relation' implies an adjustment of instruments (*μηχαναί*) to accomplish a 'definite purpose'; and adjustment for a purpose, implies a purposing Adjuster. 'Arranged' (again) has no meaning without reference to a some one who arranges; and further, by the very composition of the word, means ranged *at*, or *in relation to*, an end to be accomplished by such *ad*-rangement.

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[1] See *Edinb. Rev.* April 1879.

[2] Haeckel, *Hist. Creat.* i. 5.

[3] *Ibid.* i. 34, 36.

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[1] Haeckel, *Hist. Creat.* i. 19.

[2] *Ibid.* i. 23, 86.

[3] *Ibid.* i. 234–251.

[4] *Ibid.* i. 262.

Who, then, can refuse assent to the protest of Noiré against such self-contradictory theories of Nature? 'The Materialist says: "We rest not till we have resolved each form of existence, however complicated, into a simple mechanical process." Yes indeed! When you see a building rise before you, have you explained its construction by reckoning up how much carbon and nitrogen the men employed upon it take in and breathe out daily; and so discovering how much vital force they have expended in the laying of the stones, the insertion of the beams, and so on? Is there not, over and above this, a Spirit which has to do with the work? Must we not take account of the Architect who has devised the plan and is superintending its execution? Or do you fancy that you eliminate this factor also when you have reckoned up how many atoms of carbon and water his brain has consumed while he was elaborating this plan and carrying it out? A pretty sort of reckoning, truly! This man himself is but a developed Individuality, which has gone through an enormous series of changes, the first step of which was the piling by him around himself a heap of earthy particles to work them up into a dwelling for himself. Nay further, have not all the nations of the earth, Assyrians, Persians, Greeks, Romans, Germans, Italians, with each its own purely spiritual development through many thousand years, contributed each its portion towards the forming in this Unit the ability to devise his plan, and carry it out? And yet you would assign for the product thus accomplished "a purely mechanical origin"! Out upon you! Even Haeckel and Darwin (for they are great Idealists) will show you what Spirit can do, and what a work development is. But, nevertheless, it pleases you to deny all Spirit. Well therefore may we rejoin that your interpretation of the Universe is absolutely *spiritless!*'[1]

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[1] Noiré, *Monistische Gedanke*, p. 31. Compare Fiske, *Darwinism*, pp. 4–7: 'The theological objection to natural selection is precisely the objection Leibnitz made to gravitation—that the action of physical forces appears to be thereby substituted for the direct action of the Deity. But in no case whatever can science use the words "force" or "cause" except as metaphorically descriptive of some observed or observable sequence of phenomena. They are no 'Entities' having a mode of action distinguishable from that of universal Deity. And consequently, at no imaginable future time

3. We come now to the last class of Facts, very patent in Nature, which brings before us testimony of Mind pervading this Nature. We have ample evidence not only of Adjustment of all things, each to each in orderly conjunction; and of Development of all things, each from each, in orderly succession; but of *Actuation*, each by each, in orderly co-operation towards *beneficial ends.*

These Facts advance us from the proof of Mind designing and accomplishing, to the proof of Mind designing and accomplishing for the *welfare* of its objects. They establish, therefore, the old argument of Paley against all the attacks of modern Pessimism. You see everywhere contrivances for producing benevolent results. You see no contrivances for producing malevolent results. Teeth are not made to ache. No organisms are framed in order to pain. Nay, all things are fitted each to each to bring out pleasure. On one side, organisms endowed with a capacity for pleasure; on the other side, or-

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can science attempt to substitute the action of any other power for the direct action of Deity. Darwinism may convince us that the existence of highly complicated organisms is the result of an infinitely diversified aggregate of circumstances so minute as severally to seem trivial or accidental; yet the consistent Theist will always occupy an impregnable position in maintaining that the entire series in each and every one of its incidents is an immediate manifestation of the creative action of God.'

ganisms suited to produce this pleasure. The eye for light, and light for the eye. The palate for relish, and savours for the palate. The vibrations of measured sound co-working with the ear to beget the ecstasy of harmony. The sun co-working with the bodily system to produce the glow of warmth. The very antagonisms of seemingly injurious circumstance co-working with the will to give birth to the animation of resolve, the energy of struggle, the triumphs of success. Labour itself has its pleasures. The joy of production overbalances its toil. And our sense of personality is then first satisfied when we have got the better of attacks upon it.

Thus, then, Adaptation presents itself everywhere in the form of Adjustment for good ends by corresponding means. And such Adjustment proves to us not only Mind in all things, but Mind actuating all things, *with a good intention, towards good results.* As in the human Microcosm the doings of the individual show that he has mind, and show moreover what sort of mind he has; so in the Macrocosm of the Universe, you cannot admit the first set of proofs and refuse the other. In the case of men we interpret their disposition by their doings; in the case of Nature we must do the same. How do we know that there is Mind in men? By the same reason do we know that Mind pervades the Universe. By the same reason do we know that this Mind is Good.

This is the conclusion which Socrates constantly presses: 'Your own soul, the undoubted Ruler of your body, you have never seen. Why, then, question the similar rule of the gods? We need not hold back till we see their forms. Enough that their doings call forth reverence and worship. Your own soul rules in you; yet you have never seen it. Learn hence not to question unseen beings, but rather from the Facts of Nature to appreciate their power and venerate the divine within them.'[1]

Nor less frequent is the argument of Plato, that all Seeming must have Substance for its base; all shadows be referred to Somewhat which casts them; all development be the visible variation of an invisible constant; all *un*folding, the outcome from a Something which *in*folds it; all Becoming, the exponent of Being; and all intelligent Becoming, the manifestation of intelligent Being. 'Look at the vast expanse of heaven. You see it distinguished by Order and Adjustment. Whence, indeed, its name of Cosmos. Now, can you suppress the question, *Whence* this Order and Adjustment? Has it no beginning? Must it not rather be derived from Something? Assuredly derived, because it is visible, tangible, extended, and all things visible, tangible, extended, as joint products of impressions and repressions, are merely variables of something constant; they are things begotten, which imply as their necessary correlate something that begets. And this Something that begets, the Fashioner and Father of that Whole of which we are only parts, it is difficult to conceive, and still more difficult to speak of to mankind at large.'[1]

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[1] For the Texts, see Appendix, Note XXV.

So also Aristotle rises from the Facts of Nature to an Author of Nature. He begins with the fact of the continuous Development of all things—their Change and Motion, whether it be quantitative (change of size), or qualitative (change of properties), or correlative (change of place)—and thereon he builds this argument: 'All movement must result from a moving cause. But this moving Cause cannot reside in the things moved, for these are reciprocally cause and effect, moved as well as moving. Therefore the moving Cause, to be exempt from this reciprocity, must, while moving others, be motionless itself; must therefore be a Somewhat prior and superior to all things moveable, having this for its distinctive mark—that it is the motionless mover of all motion. And this Somewhat is the Monarch of all.'[1]

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[1] Plato, *Timæus*, 28 b.c. 29 a.

But this Prime Mover must be intelligent. For he is not only the originant of motion, but of the idea in conformity with which motion shall take place. As all the movements in the universe move in accordance with an idea—exhibit (that is) not bare change, but change *for a purpose*—so must He in whom this idea dwells be possessed of purpose. He moves nothing at random. He moves nothing without result. He must therefore be Mind; a Substance having mind, entirely diverse from mere material things; the Mind in all mind; the self-contemplative Mind; who is both the Minder and the minded; in whom this self-perception, as the highest mode of energising, constitutes, the noblest and most blessed life; who is himself the Ever-living and the Best.[2]

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[1] Aristotle, *Met.* xii. 7: κινεῖ οὐ κινούμενον.
Ibid. xii. 10: οὐκ ἀγαθὸν πολυκοιρανίη· εἷς κοίρανος ἔστω. Which Boethius (iii. 9) has rendered:

> 'O qui perpetua mundum ratione gubernas,
> . . . stabilisque manens das cuncta moveri.'

[2] Aristotle, *Met.* xii. 7. For the Texts, see Appendix, Note XXVI.

Nor are the Stoics less decided in their recognition of God as Intellect and Goodness. 'It is not easy even to imagine God without intelligent determination; aye and determination for our good; for what could induce him to have ill-will to any thing?' 'God we must never blame, for he never injures any one either willingly or unwillingly.' Nay, he has eternally designed, and incessantly is working out, our good. 'Whatever happens to you was afore prepared for you; the web of your being, and of your relation to other beings, has been woven for you from eternity.'

Thus, then, we find the noblest Thinkers drawing their conclusions not from *à priori* fancies, but from *à posteriori* observation of Facts in universal Nature; assuring themselves of a Mind in this Nature, orderly, beautiful, and beneficent, like the mind in man. What wonder, then, if they travel on from this to the recognition of a Being in Nature, the subject of this mind, who must be conceived and spoken of, *in respect to these qualities*, as similar to man? For 'mind' is no substantive term; it is purely adjectival. It denotes a quality, or qualities, in some Subject. And this Subject, judging from these qualities, must be, *so far forth*, like ourselves.

Yet such conclusions are now exclaimed against as Anthropomorphism; as making the Inscrutable a magnified Man. Where it seems forgotten that to think and speak of the Unknown at all we cannot do otherwise than think and speak of Him in terms derived from what we know: and that the Life which actuates the universe is much less worthily described by terms derived from mechanical movement, as by Corpuscular Philosophers; or from vegetable growth, as by our rude forefathers, with their mystic Igdrasil, the Ash-tree of existence, whose roots were in Hela, and its boughs were the universe. Anthropomorphism is at least the greatest possible advance beyond Phytomorphism. Mr. Spencer himself cannot avoid Anthropomorphism; for he speaks of 'the Power manifested in the universe.' But we know of Power only through our human experience. And by the same human experience we know of Order, Beauty, and Goodness in the manifestations of this Power. Therefore just as much as we are authorised to speak of 'the Power manifested in the universe,' just so much are we authorised to speak of this Power as orderly, beautiful, and good; in like manner, and so far forth, as when we see similar manifestations of a *human* mind we call this human mind—because of these manifestations—orderly, beauteous, and good.

Still, not the less must we ever remind ourselves that we are, in all this, conceiving the Unknown *as best we can* in terms of the Known, and therefore are using for ourselves, and offering to others, only Symbols of truth. These symbols we derive from Analogy.[1] But Analogy 'does not mean the sameness of two *things*, but only the similarity of two *relations*. And things most unlike in their nature may be strictly analogous as to their relations. . . . Nor must we presume that because the relation is similar in one or two points, therefore it is similar in all.'[2] Though, therefore, seeing results in Nature similar to what in these respects would be the results of a human mind, we attribute these to a Mind *like* our own, we do not therewith affirm, nor pretend to affirm, that this Mind is in all things *the same* as our own. In many respects it may be, must be, different from ours; not seeing as we see, not operating as we operate, not going through a course of prevision and provision as we foresee and fore-provide. This we were long ago reminded of by Xenophanes, when he said that 'the Mind in the universe operates neither by the discursive method which tracks premisses to their conclusion, nor by the architectonic, which works out plans to their performance; but rather, what we reach by toilsome inference it sees at once by direct intuition; and what we accomplish by the labour of thinking it actuates with no labour at all.'[1]

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[1] And 'in dealing with the speculative we are *forced* to substitute analogies for perceptions, and to rely on inferences.'—Lewes, *Problems of Life*, i. 6–18.

[2] Bp. Copleston on *Necessity*, 122–130.

Nor are we ever to suppose that the intimations of such a Mind, suggested to us by the facts of Nature, qualify us to form a judgment upon *all* the workings of this Mind. We gather from those Facts the direction only of its current; we cannot thereupon call in question the windings of the stream. So that when men object that the Intelligence we speak of is not everywhere manifest; the Beauty is sometimes absent; the Goodness is often doubtful; and consequently that such a Mind, even if existing, must be inefficient, our answer is, 'The data before us authorise a *general* conclusion; a *universal* one we do not pretend to be able to arrive at. For we have no capacity to sweep the whole vast field of observation. We cannot, with the eye of an emmet, scan a Universe. We may divine but cannot measure infinite Mind.'

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[1] See Appendix, Note XXVII.

Nay more. Limited as is our outlook over Space, more limited still is our onlook through Time. As we cannot measure infinite expansion, still less can we sum an infinite series. And the universe must be an infinite series, not to be calculated from one or two intermediate terms. We may seize the Idea of its development; we may surmise the law of its development; but we cannot determine all the momenta of this development. We may divine the radius of curvature, but we cannot see the curve. And so, to all objections drawn from partial instances ill understood, we may reply in the words of Socrates concerning Heraclitus the Obscure, 'Whatever I understand of him, I find to be replete with wisdom: therefore, whatever I do not understand, I still believe to be equally wise.' Nay, we may burst out, with the faith of Cleanthes, into his Hymn of praise,[1]

No single work is done on earth apart from Thee,
Except what bad men perpetrate through foolishness!
But thou know'st how to prune misgrowths and train them
    straight,
To beautify the ugly, and make evil serve to good;
For Thou dost so resolve the discords of the world,
That one unbroken strain of Reason runs through all!

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[1] Οὐδέ τι γίγνεται ἔργον ἐπὶ χθονὶ σοῦ δίχα, δαῖμον,
πλὴν ὁπόσα ῥέζουσι κακοὶ σφετέρησιν ἀνοίαις·
ἀλλὰ σὺ καὶ τὰ περισσὰ ἐπίστασαι ἄρτια θεῖναι,
καὶ κοσμεῖς τὰ ἄκοσμα, καὶ οὐ φίλα σοὶ φίλα ἐστίν·
ὧδε γὰρ εἰς ἓν ἅπαντα συνήρμοκας ἐσθλὰ κακοῖσιν,
ὥσθ' ἕνα γίγνεσθαι πάντων λόγον αἰὲν ἐόντα.

NOTES.

NOTE I., PAGE 2.

Xenophon thus describes the perplexity of the untutored mind which has got no clew through the mazes of Metaphysics: 'They count all its votaries mad. For some of them they find deriding what they ought to reverence, others reverencing what they ought to deride; some rejecting divine things altogether, others worshipping idols of their own construction; some absorbing the Many in the One, others dissolving the One into the Many; some making Motion the first cause of all things, others denying Motion altogether; some believing in eternal Change, others in eternal Changelessness.'—*Mem.* i. 1. 3.

NOTE II., PAGE 3.

Hales of Eton, as quoted by Mr. Arnold in *Cornhill Mag.*, May 1879: 'I comprise it all in two words, *what* and *wherefore*. That part of your burden which contains *what*, you willingly take up; but that other, which comprehends *why*, is either too hot or too heavy: you dare not meddle with it. But I must add this also to your burden, or else I must leave you for idle persons; for without the knowledge of *why*, of the grounds or reasons of things, there is no possibility of not being deceived.' To which Mr. Arnold adds; 'He probably had in mind the words of Thucydides in the funeral oration, "We do not esteem discussion a hurt to action; what we consider mischievous is rather the setting oneself to work without *first getting the guidance of reason.*"'

NOTE III., PAGE 5.

This passion for wisdom is noted also in Proverbs xviii. 1: 'Through *desire* a man, having separated himself, seeketh and intermeddleth with all wisdom.' And by Philo: 'The soul, being led on by *love*, which is the guide to wisdom, aspires to intellectual perception' (*De Creat.* 22). 'By the contemplation of the heavenly bodies the mind is smitten with a *love* and *longing* for knowledge, and *from such longing springs philosophy*.'—*Ibid.* 25.

NOTE IV., PAGE 5.

For this pure disinterestedness as constituting the very nature of the Philosopher, see Cicero (*Tusc.* v. 3): 'As in the public games some come seeking honour, others profit, while a few come only as spectators, and inquirers into what is done, and how it is done; so, like-minded men (though such are rare) come, as it were, from a foreign clime into this life with no desire but to contemplate and investigate the nature of things. And these men are lovers of wisdom—i.e. Philosophers.'[1]

And the delight of such contemplative minds, and their exceeding great reward, are beautifully pictured in another passage of Cicero (*Acad. Prior.* ii. 41): 'Est animorum ingeniorumque naturale quoddam quasi pabulum consideratio contemplatioque naturæ. Erigimur, elatiores fieri videmur;

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[1] Epictetus employs the same comparison (ii. 14).

humana despicimus, cogitantesque supera atque cælestia, hæc nostra ut exigua et minima contemnimus. Indagatio ipsa rerum cum maximarum, tum etiam occultissimarum, habet oblectationem. Si vero aliquid occurrit quod verisimile videatur humanissima completur animus voluptate.'

'The consideration of Nature is the natural food for human minds. For by this we get raised above ourselves; become elate with dignity; look down upon the world, and by the contemplation of heavenly things reduce to their real littleness the things of earth. The mere search itself into things so high, and so withdrawn from common perception, has its delights; but when this search discovers for us what looks like truth, then do we become filled with that special pleasure which most befits the nature of man.'

Add M. Müller, in *Cont. Rev.*, Nov. 1879: 'That is the true academic stage in any man's life, when he learns to work, not to please others, but to please himself; when he works from sheer love of work, and for the highest of all purposes, the conquest of truth. Those only who have passed through that stage know the real blessings of work. The world does not know the triumphant joy with which the true mountaineer, high above clouds and mountain walls that once seemed unsurpassable, drinks in the fresh air of the High Alps; and, away from the fumes, the dust and the noises of the city, revels alone in freedom of thought, in freedom of feeling, and in the freedom of the highest faith.'

See also Clifford, *Lectures and Essays*, i. 104: 'The positive condition of all upward development is that the mind should be creative more than merely acquisitive. The most useful parts of science have been investigated for the sake of truth, and not for their usefulness. A new branch of mathematics, which has sprung up in the last twenty years, was denounced as doomed to be forgotten on account of its uselessness. It now turns out that the reason why we cannot go further in our investigation of molecular action is that we do not know enough of this branch of mathematics.'

NOTE V., PAGE 6.

Compare Plato, *Rep.* vi. 484: 'Those who have the power to apprehend the eternal and immutable are Philosophers; those who wander amidst particulars only, are none.'[1]

Cicero, *De Off.* ii. 2: 'Wisdom is the comprehensive acquaintance with all things human and divine *in their causes and correlations.*'[2]

Knight, in *The Nineteenth Century*, Sept. 1878: 'There is a quest for unity; that supreme unity in which all the separateness and detail of miscellaneous knowledge is lost to view.'

NOTE VI., PAGE 6.

See Aristotle, *Met.* v. 1: 'There are three departments of Philosophy—the Physical, the Mathematical, and the Primary. The Physical occupies itself with the consideration of things presented to us through the senses, which are subject to change and are of material stuff; the Mathematical, with the consideration of things not subject to change, yet still separable (at least in thought) from actual matter; the Primary, with things subject to no change and altogether separable from material stuff. And this last it is which supplies us with those *First Principles* by which we must be guided in our study of all the other Sciences. For the business of this Primary Philosophy is to contemplate that which IS—so far forth as it is ; and what it is ; and what pertains to it so far forth as it is (*περὶ τοῦ ὄντος ᾗ ὂν, ταύτης ἂν εἴη θεωρῆσαι, καὶ τί ἐστι, καὶ τὰ ὑπάρχοντα καθόλου, ᾗ ὄν*).'

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[1] *Φιλόσοφοι μὲν, οἱ τοῦ ἀεὶ κατὰ ταὐτὰ ὡσαύτως ἔχοντος δυνάμενοι ἐφάπτεσθαι · οἱ δὲ μὴ, ἀλλ' ἐν πολλοῖς καὶ πάντως ἴσχουσι πλανώμενοι, οὐ φιλόσοφοι.*

[2] 'Sapientia autem est (ut a veteribus philosophis definitum est) rerum divinarum et humanarum, *caussarumque quibus hæ res continentur*, scientia; cujus studium qui vituperat, haud sane intelligo quidnam sit quod laudandum putet.'

Emerson, *Representative Men*, 20 : 'Every one who would do any thing well must come to it from a higher ground.'

Haeckel, *Hist. of Creation*, E. T., i. 80 : 'It is through Philosophy alone that natural knowledge becomes true Science ; i.e. a Philosophy of Nature.'

Knight, *The Nineteenth Century*, Sept. 1878 ; 'Even the leaders of Physical research are dealing with Metaphysical questions. The topics with which modern Science is most engrossed are speculative ones. Even those who abjure Metaphysics, unconsciously philosophise in their rejection of it.'

Id. *Ibid.* : 'The position of Philosophy is to get behind all metaphoric modes of thought, or pictured representations of reality, to the Reality itself. Thus Philosophy teaches that, beyond the customary and traditional, behind the pictorial and concrete, within the changing, and beneath the miscellaneous, lies the sphere of the true, the real, the sempiternal, and the One.'

Carriere, *Sittliche Weltordnung*, 109. 'Science on its empirical side confines itself to Facts, and the more immediate causes of them ; but on its philosophical side it takes in also Inquiry into the principles and purpose of the whole system of things.'

NOTE VII., PAGE 8.

Compare Epicharmus: 'It is mind alone that sees, and mind that hears; all things else are deaf and blind.'[1]

Seneca, *Nat. Qu. Præf.*: 'Divine Philosophy has never remained satisfied with what the eye can see. It has surmised something nobler and more fair, which Nature has reserved beyond the reach of merely superficial observation.'[2]

Bacon, *Nov. Org.* xcv.: 'The true business of Philosophy is not alone or mainly to lay up in the memory materials supplied by natural history, or mechanical experiments, just as we have obtained them; but rather to work up the notions obtained through sense into the purer forms of mind (non ex historia naturali et mechanicis experimentis præbitam materiam in memoria integram, sed in intellectu *mutatam* et subactam reponere).'

Which is but the old Greek definition of Philosophy as 'Progression from bodily Sight to mental Insight (*Ἴσμεν γὰρ οὐδὲν τρανὲς, ἀλλ' ἀλώμεθα*);' and corresponds with that of Herbart: 'Philosophy consists in the working up anew of our first notions;'[3] and of Ferrier: 'Philosophy exists only to correct the inadvertencies of ordinary thinking;'[4] and of Henry Holbeach (ii. 321): 'All progression in truth consists in the re-adjustment of conceptions;' and of Hume, 'Philosophical decisions are nothing but the reflections of common life methodised and corrected;'[1] and of Lewes, 'Philosophy travels onward from the first notions of vague blank observation to the definite conceptions of scientific theory. For the Philosopher cares for more than he sees, and is a Philosopher because he cares.'[2] So we are told of Lord Falkland's Convivium philosophicum, at Great Tew, that it had for its end, 'to examine and refine those grosser propositions which laziness and consent make current in vulgar conversation.'[3]

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[1] *Νοῦς ὁρᾷ, καὶ νοῦς ἀκούει, τἄλλα κοῦφα καὶ τυφλά.*

[2] Quantum inter philosophiam interest et ceteras artes, tantum interesse existimo in ipsa philosophia inter illam partem quæ ad homines et hanc quæ ad deos spectat. Altior est hæc et animosior; multum permisit sibi; non fuit oculis contenta; majus esse quiddam suspicata est ac pulchrius quod extra conspectum natura posuisset.'

[3] Herbart, *Lehrbuch der Philosophie*, § 4: 'Philosophie ist Bearbeitung der Begriffe.'

[4] Ferrier, *Inst. of Met.* 32.

In like manner Bruno says, 'We must ascend continuously from the particular to the general. In the particular we find self-contradictions, but by means of the general we bring them into harmony. And this bringing into harmony of contradictions is the end of all science.'[4]

Compare Grote's *History of Greece*, viii. 670: 'Who has not found it necessary to break up and disentangle, analyse, and reconstruct his ancient mental compounds?'

NOTE VIII., PAGE 8.

All firm conviction, therefore, is the victory achieved (*con-vinco*) by valorous conflict with awakening Doubt. Only as we boldly question the phantoms of sense shall we come to ascertain, and be sure of, the Realities of which they are Phantoms.

Hence Epicharmus prescribes: 'Keep your eyes open and be given to questioning; for these are the hinges on which all intelligence turns.'[5]

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[1] Hume, *Works*, iv. 189, as quoted by Huxley (*Hume*, p. 58).

[2] Lewes, *Problems of Life and Mind*, ii. 253.

[3] See M. Arnold, *Mixed Essays*, 228.

[4] Bruno, in Ritter's *Christliche Phil.* i. 122.

[5] Νάφε, καὶ μεμνᾶσε ἀπιστεῖν, ἄρθρα ταῦτα τῶν φρένεων.

And Aristotle, *Met.* ii. 1: 'In order to attain certain knowledge we must begin with finding out what is yet uncertain. All, therefore, who desire to take a sure path will exercise a prudent suspicion about their actual paths. For the later sure path must be found through untying the knots of our previous perplexed paths. And we cannot untie a knot till we have found that there is a knot to untie.'[1]

In like manner St. Paul reminds us that, 'If anyone hink he knoweth anything he knoweth nothing yet as he ought to know.'—1 Cor. viii. 2.

And so Cebes: 'Some make as if they knew what they really do not know; and while they cherish this delusion nothing can induce them to desire true knowledge.'[2]

And Cicero: 'The beginning of all Philosophy lies in the discovery of our ignorance. For what is worse than rashness of opinion? And what can be more rash, and more unworthy of a thoughtful man, than to believe what is untrue, or to defend as past all doubt what we have not yet sufficiently searched into?'[3]

Whence Clement of Alexandria commends as praise-worthy in Philosophers, that, 'if they did not attain to any certainty of truth, at least they suspected the falsehood of common opinion. For *such suspicion is the germ of all true wisdom.*'

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[1] *Ἀνάγκη πρὸς τὴν ἐπιζητουμένην ἐπιστήμην ἐπελθεῖν ἡμᾶς πρῶτον περὶ ὧν ἀπορῆσαι δεῖ πρῶτον. . . , ἔστι δὲ τοῖς εὐπορῆσαι βουλομένοις προὔργου τὸ διαπορῆσαι καλῶς. ἡ γὰρ ὕστερον εὐπορία λύσις τῶν πρότερον ἀπορουμένων ἐστί. λύειν δ' οὐκ ἔστιν ἀγνοοῦντα τὸν δεσμόν.*

[2] *Προσποιοῦνται ἐπίστασθαι ἃ οὐκ οἴδασιν· ἕως δ' ἂν ἔχωσι ταύτην τὴν δόξαν ἀκινήτους αὐτοὺς ἀνάγκη εἶναι πρὸς τὸ ὁρμᾶν πρὸς τὴν ἀληθινὴν παιδείαν.*

[3] Cicero, *De Nat. D.* i. 1: 'Tam variæ sunt doctissimorum hominum tamque discrepantes sententiæ, ut magno argumento esse debeat caussam id est principium philosophiæ esse inscientiam, prudenterque Academicos a rebus incertis adsensionem cohibuisse. Quid est enim temeritate turpius? aut quid tam temerarium tamque indignum sapientis gravitate atque constantia quam, aut falsum sentire, aut quod non satis explorate perceptum sit et cognitum sine ulla dubitatione defendere?'

And Augustine writes, 'I willingly accept your questioning, for this shows a cautious mind, the best preservative of real tranquillity. For we cannot keep our minds undisturbed when we find opinions on which we have leaned with a too hasty confidence tottering under the onset of contrary assertions and snatched out of our grasp. Therefore, just as much as it is our duty to yield to well-supported reasonings, so is it dangerous to imagine that we know what we really do not know. For then, if opinions that we held for sure and lasting become overturned, we contract such a suspicion and dread of reasoning altogether as to have no faith left for even demonstrated truth.'[1]

Nor less strongly Archbishop Leighton: 'Dubious questioning is much better than that stolid dulness which men mistake for faith. Those who know nothing in Science have no doubts; but no one ever truly believed who was not first made sensible of unbelief.'

And finally, Herbart, *Werke*, i. 560: 'Just as full conviction is beyond all price, so also is Doubt; because all Science must work itself into life from the womb of Doubt.'

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[1] Augustin, *De Magistro*: 'Dubitationem tuam non invitus accipio; significat enim animum minime temerarium, quæ custodia tranquillitatis est maxima. Nam difficillimum est omnino non perturbari cum ea quæ prona et procliva approbatione tenebamur contrariis disputationibus labefactuntur, et quasi extorquentur a manibus. Quare, ut æquum est bene consideratis perspectisque rationibus cedere, ita incognita pro cognitis habere periculosum. Metus enim est ne, cum sæpe subruuntur quæ firmissime statura et mansura præsumimus, in tantum odium vel timorem rationis incidamus ut ne ipse quidem perspicuæ veritati fides habenda videatur.'

NOTE IX., PAGE 10.

Antoninus implies these three grand divisions when he says (vii. 23): Ἡ τῶν ὅλων φύσις ἐκ τῆς ὕλης οὐσίας ὡς κηροῦ ἔπλασε. And Augustin (*Conf.* i. 6): 'Apud Te rerum omnium mutabilium immutabiles manent *origines*, et apud Te rerum omnium instabilium sunt *causæ*, et omnium irrationabilium et temporalium sempiternæ vivunt *rationes*.'

NOTE X., PAGE 18.

Thales, in Aristotle, *Met.* i. 3: Τῶν δὴ πρώτων φιλοσοφησάντων οἱ πλεῖστοι τὰς ἐν ὕλης εἴδει μόνον ᾠήθησαν ἀρχὰς εἶναι πάντων. ἐξ οὗ γάρ ἐστιν ἅπαντα τὰ ὄντα, καὶ ἐξ οὗ γίγνεται πρώτου, καὶ εἰς ὃ φθείρεται τελευταῖον, τῆς μὲν οὐσίας ὑπομενούσης τοῖς δὲ πάθεσι μεταβαλλούσης (permanent in its substance amidst all change of its affections) τοῦτο στοιχεῖον καὶ ταύτην ἀρχήν φασιν εἶναι τῶν ὄντων . . . τὸ μέντοι πλῆθος καὶ τὸ εἶδος τῆς τοιαύτης ἀρχῆς οὐ τὸ αὐτὸ πάντες λέγουσιν, ἀλλὰ Θαλῆς μὲν ὁ τῆς τοιαύτης ἀρχηγὸς φιλοσοφίας ὕδωρ φησὶν εἶναι . . . λαβὼν ἴσως τὴν ὑπόληψιν ἐκ τοῦ πάντων ὁρᾷν τὴν τροφὴν ὑγρὰν οὖσαν, καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γινόμενον καὶ τούτῳ ζῶν. . . . καὶ διὰ τὸ πάντων τὰ σπέρματα τὴν φύσιν ὑγρὰν ἔχειν.

Anaximenes, in *Plutarch*: ἐκ γὰρ τούτου τὰ πάντα γίγνεσθαι καὶ εἰς αὐτὸν πάλιν ἀναλύεσθαι.

Heraclitus, in *Ritter*: Κόσμον τὸν αὐτὸν ἁπάντων οὔτε τις θεῶν οὔτε ἀνθρώπων ἐποίησεν, ἀλλ' ἦν ἀεὶ καὶ ἔστιν καὶ ἔσται πῦρ αἰείζωον, ἁπτόμενον μέτρα καὶ ἀποσβεννύμενον μέτρα.

Πυρός τ' ἀνταμειβέσθαι πάντα, καὶ πῦρ ἁπάντων ὥσπερ χρυσοῦ χρήματα καὶ χρημάτων χρυσός.

Empedocles: τέσσαρα τῶν πάντων ῥιζώματα. Ταῦτα γὰρ ἀεὶ διαμένειν, καὶ οὐ γίνεσθαι, ἀλλ' ἢ πλήθει καὶ ὀλιγότητι συγκρινόμενα καὶ διακρινομένα, εἰς ἕν τε καὶ ἐξ ἑνός.—Aristotle, *Met.* i. 3.

Anaximander: Μία φύσις ἀόριστος καὶ κατ' εἶδος καὶ κατὰ μέγεθος.

Τοῦ δ' ἀπείρου οὐκ ἔστιν ἀρχή· ἔτι δὲ καὶ ἀγέννητον, καὶ ἄφθαρτον, ἀθάνατον καὶ ἀνώλεθρον.—Aristotle, *Phys.* iii. 4.

Ἐξ ὧν δὲ ἡ γένεσις ἔστι τοῖς οὖσι, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεών. διδόναι γὰρ αὐτὰ τίσιν καὶ δίκην τῆς ἀδικίας κατὰ τὴν τοῦ χρονοῦ τάξιν.—*In Simplicius.* See Ueberweg, I. 36.

NOTE XI., PAGE 29.

Pythagoras. See Aristotle, *Met.* i. 5: Τὸν ἀριθμὸν νομίζοντες ἀρχὴν εἶναι καὶ ὡς ὕλην τοῖς οὖσι. *Ibid.* xiii. 3; ἐξ ἀριθμῶν τὰ ὀντά.

Theanus. Οὐκ ἐξ ἀριθμοῦ, κατὰ δὲ ἀριθμόν. Just as the Potter measures out his work *according* to Number; ἐνάριθμος πᾶσα ἡ ἐργασία αὐτοῦ.—Ecclesiasticus xxxviii. 29.

Pythagoras: Μίμησιν τὰ ὄντα φασὶν εἶναι τῶν ἀριθμῶν.—Aristotle, *Met.* i. 6.

Ἔνιοι γὰρ τὴν φύσιν ἐξ ἀριθμῶν συνιστᾶσιν.—Aristotle, *De Cœlo*, iii. 1.

NOTE XII., PAGE 34.

Comp. Plato, *Theæt.* 154 ἄλλῳ ἀνθρώπῳ ἆρ' ὅμοιον καὶ σοὶ φαίνεται ὁτιοῦν; ἔχεις τοῦτο ἰσχυρῶς, ἢ πολὺ μᾶλλον, ὅτι οὐδὲ αὐτῷ ταυτὸν διὰ τὸ μηδέποτε ὁμοίως αὐτὸν σεαυτῷ ἔχειν;

And Reed on Cicero, *Acad.* ii. 33: 'No sensation is perceived alone; the percipient subject has always other synchronous sensations which are able to turn him aside from the one which is the immediate object of his attention. Circumstances quite external to the sensations themselves must be examined; the time at which they occur or during which they continue; the condition of the space within which they occur; and the apparent intervals between the person and the objects ; the state of the air ; the disposition of the person's mind; and the soundness or unsoundness of his eyes.' (From Sextus Emp., *Adv. Mat.*, vii. 167–189.)

NOTE XIII., PAGE 35.

Appearance is a Fact. See Herbart, *Hauptpunkte d. Met.* 20 : '*Das Scheinen ist wahr.*' Carlyle, *Sartor*, 103 : 'A lying vision; yet not wholly a lie, for *he saw it.*' Jevons, *Sc. Pr.* ii. 462 : 'Whatever phenomenon is, *is.* We must ignore no existence whatever; we may variously interpret its meaning and origin, but if a phenomenon exists it demands some kind of explanation. If then there is to be a competition for scientific recognition, the world without us must yield to the undoubted existence of the spirit within.'

And appearance guarantees two correlative facts : those namely of objects making this appearance, and a subject conscious of this appearance. See Herbart, *Ibid.* : 'Es liegt im Begriff des Scheins, dass er nicht in Wahrheit *das* sey, *was* da scheint. Sein Inhalt, sein Vorgespiegeltes, wird, in dem Begriff, Schein verneint. Damit erklärt man ihn ganz und gar für Nichts, wofern man ihm nicht von neuem (ganz fremd dem, was durch ihm vorgespiegelt wird) ein Seyn wiederum beifügt; aus welchem man dann noch das Scheinen abzuleiten hat. Demnach, wie viel Schein, so viel Hindeutung aufs Seyn.' And again: *Met.* ii. 78, 79, 'Die Formen der Erfahrung halten an der Empfindung. Aber die Empfindungen sind nicht Dinge, sondern Zustände. . . . Aber die Sachen fahren fort zu *erscheinen.* Woher denn der Schein? Es ist klar, dass wenn Nichts ist, auch Nichts scheinen muss. Der Schein lässt sich nicht ableugnen, nicht einmal vermindern. Man kann nicht erklären dasjenige, was da scheint, als ein Solches Wie es scheint, für real. Demnach man setzt *Etwas*; und zwar dieses Etwas wegen dieses Scheins.' So Coleridge, *Biog. Lit.* 130 : 'Each thing is what it is in consequence of some other thing. An infinite independent thing is no less a contradiction than an infinite circle, or a sideless triangle. "Unicuique percipienti aliquid *objicitur* perceptum."' And again : 'An object is inconceivable without a Subject as its antithesis. "Omne perceptum percipientem supponit."' *Carriere*, p. 23 : 'La Mettrie says that thoughts are the product of the vibrations of the brain, just as sound is the product of the vibrations of the musical string. But he forgets that these vibrations require an *ear* in order to be heard ; and a *Subject* sensible to harmony, in order to be heard as *musical tones.*' Ritter (*Unsterblichkeit*, p. 24) : 'Damit Erscheinungen sein können muss etwas *seyn*, was die Erscheinungen begründet, und von welchem wir die Erscheinungen aussagen können. Der Gedanke der Erscheinungen fordert den Gedanken von Gründen der Erscheinungen.' Spencer, *First Principles*, p. 89 : 'The relative is conceivable as such only by opposition to the irrelative or absolute. The momentum of thought irresistibly carries us beyond conditional existence to unconditional existence, and this unconditional existence ever persists in us as the body of a thought to which we can give no shape. Hence our firm belief in *objective reality*. Though we can *know* only certain impressions produced on us, we are yet, by the relativity of our thought, compelled to think of these impressions in relation to a *positive cause*. And so the notion of a *real existence* which generated these impressions becomes nascent.' Even Berkeley does not deny 'substance' as the necessary occasion of our ideas, but only 'any other substance than spirit' (§ 7). His only mistake lies in acknowledging none such substances but men and God. He is an *Akosmite*. Instead of 'looking through *nature* up to Nature's God,' he looks at once, ignoring all 'Nature,' *direct* to God. He does not deny that our ideas are caused by something other than ourselves. On the contrary, he affirms that 'the ideas actually perceived by sense have not a dependence on the will. In broad daylight, with my eyes open, it is not in my power to choose whether I shall see or no, or to determine what particular objects shall present themselves to my view; and so likewise as to the other senses; the ideas imprinted on them are not *creatures of my will*. There is therefore some other will, or spirit, that produces them.' (*Principles of Human Knowledge*, § 28.) But then he makes this 'some other will, or spirit,' to be at once and immediately, without intervention of nature, God.

NOTE XIV., PAGE 40.

Aristotle, *Met.* vii. 7: Πάντα τὰ γιγνόμενα ὑπό τέ τινος γίγνεται, καὶ ἔκ τινος, καὶ τί· τὸ δὲ ἐξ οὗ γίγνεται ἣν λέγομεν ὕλην.

Ibid. Ἅπαντα τὰ γιγνόμενα ἔχει ὕλην, δυνατὸν γὰρ εἶναι καὶ μὴ εἶναι ἕκαστον αὐτῶν. τοῦτο δὲ (i.e. τοῦτο τὸ δυνατόν) ἐστιν ἡ ἐν τῷ ἑκάστῳ ὕλη. Where the εἶναι means to *ex*-ist, to become actual as opposed to possible.

NOTE XV., PAGE 42.

Mr. Lewes, in his *Problems of Life* (i. 6–18), allows that 'whatever conceptions can be reached through *logical extensions of experience*' (which can only mean those inductions he formerly slighted as 'mere inferences'), 'and which can be known to be conformable to experience, are *legitimate products*, capable of being used as principles for further research.' And again; 'In dealing with the speculative we ought to follow the same canons as in dealing with the positive, except (!) that we are forced (!) to substitute analogies for perceptions, to employ hypothesis, and *to rely on inferences* (!). Thus, the motions of the heavenly bodies, on what do they depend? This question brings forward the speculative aspect; the principle sought cannot be *seen*, it must be *deduced*. Speculation is seeing with the mind's eye what is not present to sense. It is ideal construction.'—Lewes, *Problems*, i. 29–31.

But, in the above passage, when Mr. Lewes insists that conceptions reached through 'logical extensions of experience' are legitimate products 'only so far as they can be *known to be conformable* to experience,' he introduces a condition neither possible, always, in itself, nor consistent with his own admissions elsewhere.

For he declares (*Problems*, i. 6, 18) that '*Metaphysical* problems have rationally no other difficulties than those which beset all Problems; and, when scientifically treated, are capable of solutions *not less certain* and satisfactory than those of physics.' And again (i. 29), 'Not only the direct presentations to sense but the indirect representations, the veritable *inferences* from sense constitute the elements of the experiential method.' And again, 'The fundamental Ideas of Modern Science are as *transcendental* as any of the axioms in ancient philosophy. Who will say that the law of causation, the laws of motion, although suggested by experience, and found' [How *far* so found?] 'to be conformable with it, do not *transcend* it? These are *τὰ μετὰ τὰ φυσικά*' (Lewes's *Aristotle*, 67). And once more, 'Many of the principles of Science are principles which *transcend experience*, although rigorously conformable to it.' [To what extent *known* to be conformable, except through trust in inference?] 'They are *necessary truths* in the sense that the mind, having once understood the terms of their enunciation, cannot conceive the proposition otherwise;[1] they conform to the ideal test, *and cannot be made matter of direct observation.*' [How then can they be 'verified,' and 'known to be conformable to experience'?] 'The law of causation, for instance, and the law of inertia are not *measurable and demonstrable* in the same way as the law of refraction is measurable and demonstrable.'—Lewes, *Aristotle*, i. 84.

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[1] This is also Herbart's view of the ground of philosophica belief. 'Historische Ueberzeugung: "Ich kann nicht anders

And Mr. Lewes's own conclusions on the most important points are in harmony with this principle. For he asserts, against Berkeley, that our experience of 'Ideas' is a sufficient proof to us of 'Objects which excite these Ideas;' and his grand argument against the Bishop is that 'he has assumed the subjective fact to be at the same time the objective fact, and *the whole of this fact.*'[1] Whereas on the opposite principle that 'we can *know* only the changes which take place within us;' and that 'inference is *only* inference,' needing to be 'verified by direct or indirect reduction to sensation,' Lewes should have held 'the subjective fact *to be the whole fact.*'

Then next, he says, 'Of the existence of Spirit, or thinking Substance, we have *irrefragable* proof.'[2] Though this proof is no more than that from *inference*, and is 'incapable of being verified by reduction to sense.'

Still more; he maintains against Comte's Atheism, 'Now that we know what a mere speck is our world in the awful universe of worlds, we feel ourselves to be most insignificant; and, accompanying this feeling, a grander conception of the universe and of God emerges eminent in our soul.'[3]

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sehen!" Philosophische Ueberzeugung: "Ich kann nicht anders *denken.*" Subjectiv gültig: *ich* kann nicht anders; Objectiv gültig: *der Gedanke selbst* führt auf eine *innere Unmöglichkeit seines Gegentheils.* Darauf beruht alle Metaphysik.'—*Werke*, i. 563.

[1] Lewes, *Hist. of Phil.* 1 ed. iv. 27.

[2] *Hist. of Phil.* 1 ed. iv. 24.

[3] Lewes's *Comte*, 91.

Whereas, of all truths insusceptible of being 'verified by reduction to sense' this, of the being of God, is the least possible and yet the surest.

Nor, without admitting, as Mr. Lewes thus does, the worth of 'inference' unverifiable by reduction to sense, can he justify what he says of astronomical certainty. 'Newton's identification of celestial and terrestrial was only an hypothesis; and so was the extension of gravitation beyond the solar system' (*Problems*, i. 51). For neither of these hypotheses is 'verifiable by reduction to sense' to the whole extent in which they are accepted and relied on; on the contrary, Sir John Herschel says, 'our *evidence* of the existence of gravitation *fails us* beyond the region of the double stars; or leaves at best only a presumption, amounting to moral conviction (?) in its favour.'[1] So that we are brought here in the sphere of Mathematics as well as of Metaphysics, to the conclusion which Lewes has so well (though inconsistently with himself) expressed elsewhere: 'All Facts are indissolubly ideal; the appearances of things *to us*, and not the things *per se*; and, so far from any Fact being the unadulterated image of its object, the conditions of our consciousness are necessarily mingled with it. In the simplest Fact *an inference is blended with the sensation.* A Fact is a *bundle of inferences* tied together by one or more sensations. How then is it verified? By submitting each of its constituent inferences to the primordial test of consciousness. This test, with regard to objects of sense, is the reduction of inference to sensation; *but* with regard to *principles transcending sense*, it is *conformity with the laws of thought.* And when we have thus verified a Fact we have attained' (mark well that this is affirmed of the second class of things equally as of the first) '*the highest degree of certitude.*'[1]

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[1] Herschel, *Lect. on Science*, 220.

Thus, therefore, we are brought back, by this shrewd though vacillating writer, to the fundamental principle of Butler, 'Probability' (i.e. 'conformity with the laws of thought') 'is the guide of life.' A principle which was also that of Cicero: 'Let the wise man be satisfied with whatever presents itself as probable, when he can discover no overwhelming contradictions to it. Then will his whole course of life be guided aright. For, in fact, even your Sceptic yields himself to many things which are simply probable; not comprehended, not seen to be certain, not fully assented to, but only having the likelihood of truth. And if he did not do this, there would be no living at all.'[1]

NOTE XVI., PAGE 43.

See Hebrews, xi. 3: *Εἰς τὸ μὴ ἐκ φαινομένων τὸ βλεπόμενον γεγονέναι.* Where the *μὴ ἐκ φαινομένων* (not from things which do appear) requires as its antithesis *ἀλλ' ἐξ οὐ φαινομένων* (but from things which *do not appear*). The vulgar notion that the worlds were framed from things which *are* not (*ἐξ οὐκ ὄντων*, out of nothing), owes its origin to the 2 Maccabees, vii. 28, 'Look upon the heaven and the earth and all that is therein, and consider that God made them *of things that are not* (*ἐξ οὐκ ὄντων*)'; and from the Vulgate translation of this, 'ex nihilo.' But the *Book of*

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[1] Lewes's *Aristotle*, 70–75.

[2] Cicero, *Acad. Priora*, ii. 31: 'Sic, quidquid acciderit specie probabile, si nihil se offerret quod sit probabilitati illi contrarium, utetur eo sapiens, ac sic omnis ratio vitæ gubernabitur. Etenim is quoque, qui a vobis sapiens inducitur, multa sequitur probabilia, non comprehensa neque percepta, neque adsensa, sed similia veri; quæ nisi probet omnis vita tollitur.'

Wisdom says more correctly (xi. 17), 'Thy almighty hand made the world out of formless matter (*κτίσας τὸν κόσμον ἐξ ἀμόρφου ὕλης*).' And Philo, 'Nothing can come from nothing or be resolved into nothing.' Whence St. Paul attributes the rise of all things directly to *God* as their primary source, 'Out of Him (*ἐξ αὐτοῦ*) are all things,' Rom. xi. 36. And, again, 1 Cor. viii. 6, 'To us there is but one God, the Father, out of whom come all things (*ἐξ οὗ τὰ πάντα*).'

Comp. Lewes, *Hist. Phil.* iv. 10: 'It is owing to the ambiguities of language that Berkeley's theory seems to run counter to the ordinary belief of mankind, because by Matter men commonly understand the seen, the tasted, the touched, etc.; therefore when the existence of Matter is denied, people naturally suppose that the existence of the seen, the tasted, and the touched is denied, never suspecting that Matter, in its philosophical sense, is *the not seen, not tasted, not touched*.'

These 'things which do not appear' must ever remain the ultimates to which all thought can reach. As Spencer says (*Sociology*, 311), 'The hypothesis of molecules and atoms enables chemists to work out multitudinous interpretations that are verified by experience; but the *ultimate unit* of matter admits of no consistent conceptions. Instead of the particular mysteries presented by those actions of matter which the chemists have explained, there rises into prominence *the mystery* which matter universally presents, and which proves to be absolute.'

All our enquiries, therefore, about Matter bring us to the full acceptance of the doctrine of the Epistle to the Hebrews, 'The visible, in all its extent, and to all its attainable depth, is but the outcome and expression of the invisible.' And it is the conviction of this invisible (*ἔλεγχος οὐ βλεπομένων*), which the same authority defines as *Faith*, and which constitutes the essence of all religion. For religion has for its ground the sense of the invisible. Not, as Max Müller has defined it, 'the sense of the *Infinite*,' for 'the Infinite' is a very advanced conception; unless, indeed, by 'the Infinite' he means simply τὸ ἀόριστον, without definable, conceivable, bounds; as he seems to do by substituting for it elsewhere 'the invisible,' the *beyond our ken*, the *not yet* present to us. Religion is the anticipation (the 'inborn, untaught, surmise,' as Cicero uses the word[1]) of somewhat ever in advance of our horizon, transcending all that we can see, touch, or image to ourselves. Just as in the Vedas, there is felt to be *beyond* the Dawn, a somewhat that dawns; *beyond* the flame, a somewhat that inflames; *beyond* the rain, a somewhat that brings rain; *beyond* the brightness of the sky, a somewhat which produces this brightness. Or; taking 'Nature' to denote the whole range of what comes out to be perceived by any of our senses (the 'begotten,' the γιγνόμενον), religion is the sense of a somewhat *super*-natural out of which phenomena are begotten, which we define as simply *being* (τὸ ὄν). See the Upanishad in Müller's *Hibbert Lectures*, p. 337, 'The Brahman cannot be reached by the eye, by speech, by mind; he cannot be apprehended except as one who says simply 'He IS.' And again, 'There is one eternal Thinker, thinking non-eternal thoughts;' i.e. Being, putting itself forth in ever new Becomings. As Müller sums up the doctrine of the Upanishads (p. 360), 'Here is the Infinite which had been recognised as behind a Veil in the mountains and rivers, in the sun and the sky, in the endless dawn, in the heavenly Father, in Nisvarkarman the Maker of all things, in Pragapati the Lord of all life; and which was seen at last in the highest and purest form that the Indian intellect could reach. Can we define Him? they said, or comprehend Him? No! they replied. All we can say of Him is No! No! He is not this; He is not that. He is not the Maker, not the Father, not the sky or the sun, not the rivers or the mountains. Whatever we have called Him that He is not. We cannot comprehend or name Him,[1] but we can feel Him.[2] We cannot know Him, but we can apprehend Him. And if we have once found Him we can never escape from Him. We are then at rest, are free, are blessed.'

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[1] 'Quæ gens non habet sine doctrina *anticipationem* quandam deorum? quam appellat πρόληψιν Epicurus, id est, anteceptam animo rei quandam informationem, sine qua nec intellegi quicquam, nec quæri, nec disputari potest' (*De N. D.* i. 16). Which πρόληψις Diogenes Laertius explains as an ἔννοια, ἢ καθολικὴ νόησις ἐναποκειμένη (stored up in the mind).—x. 33.

And just this is the doctrine of the sacred Scriptures. The search for *the Ultimate*, the 'Jenseits;' the conviction, after all, that travel on as we may, from sense to imagination, and from imagination to abstraction, we can never reach it; and the resulting sense of the Inscrutable, the Undiscoverable, the Inconceivable;—this pervades such passages as Job xi. 7, and Psalm cxxxix. 6, 7, 'Canst thou by searching find out God?' 'Behold I go forward, but He is not there; backward, but I cannot perceive Him; on the left hand, where He works but works unseen; on the right hand where he hideth himself that I cannot behold him!' 'Such knowledge is too wonderful for me, I cannot attain to it! Whither shall I go from thy Spirit, or whither shall I flee from thy presence!'

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[1] Comp. Prov. xxx. 3, 4: 'I neither learned wisdom, nor have I the knowledge of the holy. Who hath ascended up into heaven or descended? who hath gathered the winds in his grasp? who hath bound the waters as with a garment? who hath made firm all the ends of the earth? What is his *name*? and what is his son's name, if thou canst tell?'

[2] Comp. Acts xvii. 26–28: 'He hath made of one blood all the nations of the earth in order that they may *seek after Him* and find Him: for he is not far from any one of us, seeing that in Him we live and move and have our being.'

NOTE XVII., PAGE 48.

Mr. Croll, with similar self-satisfiedness, stops also at Atoms and Motion as ultimates. 'If you ask, Where did the two bodies' (i.e. of the Sun, according to his theory) 'get their velocity? you may as well ask, Where did they get their existence? It is just as easy to conceive that they always existed in motion as to conceive that they always existed at rest.' (See *Cornhill Mag.* Sept. 1878.) Against which consult Noiré (*Mon. Gedanke*, 18–20): 'Materialism indulges in Metaphysics as much as any of the systems which it derides. It boasts itself as keeping close to mere Physics, and explaining the universe by eternal, unchangeable laws; but of the nature of these laws, and why they act in one way, and no other, they have nothing to say. And by running up every thing into Movement and the laws of Movement, it overlooks that essential property of things to which Movement is merely subservient. I mean their Sensibility, which lies at the bottom of all Mobility. The quantity of Motion is constant: it is Sensibility which is ever varying and causing variation, ever creating and regulating, ever balancing and determining, ever causing all things to move each other in an endless chain of reciprocal interaction.' Compare Carriere, 'Movement is no Thing in itself, but the energizing of the two Things that move and are moved.' 'Die Bewegung ist kein Wesen fur sich, sondern die Bethätigung des Bewegenden und Bewegten.' (*Sittl. Welt.* 44.) And Prof. Knight (in *Nineteenth Century*, Sept. 1878), 'The phenomena of simple succession do not explain a single occurrence in Nature. And the fact that in these phenomena we discover a progress does not explain the *cause* of this progress. That this cause is contained within the phenomena themselves, and is not due to a force distinct from the phenomena and pervading the entire series, is a dogmatic appendix which the experience-philosophy superadds to the facts.'

Note XVIII., Page 50.

See Carriere, *Die sittl. Weltordnung*, pp. 33, 34: 'We press against a wall, and call this firm resisting object the "matter" of things; but what we really are sensible of is simply the counter-pressure. And this counter-pressure we attribute to some corresponding "Force;" whence all Being takes in our mind the form of a system of "Forces." But these are, in fact, only the self-affirming Acts of each elementary particle to stop the intrusion on it of all other particles.'

'We have as yet no proof whatever that Force proper has objective existence. In all probability there is no such *thing* as force any more than there is such a *thing* as sound, or as light, which are mere names for physical impressions upon special nerves by the energy of undulatory motions of certain media (see the *Unseen Universe*, § 97). Gravitation, force, monad, ether, and the like, are not *things* that we know by sensuous experience, but *names* upon which we hang our faith. So far is it from being true that "where Faith begins, Science ends."'—*British Quarterly*, Jan. 1879.

Note XIX., Page 51.

Compare Bruno, in Ritter, *Christl. Phil.* i. 193: 'Matter is nothing corpuscular, nothing sensible; we come to know it, not through the senses but through reflection. It is the universal ground of all development,'—the Reality which underlies all Appearance, the Being which begets all Becoming.

And Plumacher, in *Mind*, for January 1879 : 'Mr. Sully says, "Force is in Science proper nothing but a serviceable fiction." If then Science does not know Force, what is the ultimate phenomenon of which the whole corporeal world is the product? Motion, he replies. But Motion can be understood only as *the function of a Subject.* Even supposing it could be empirically shown that the elementary qualities, heat, light, etc., are caused by motion, we should still have to face the questions, *Whence* these motions? What is their cause, and what are they? The conception of Motion does not dispense with the conception of Force; there would be no motion if there were no Force. . . . If I am convinced that my nature is not a mere colossal humbug, whose very existence I can neither affirm nor deny, but that it corresponds to an objective truth; if by the very constitution of my mind I am forced to suppose Things-in-themselves behind my representations, as the cause of these representations, then I stand on the ground of *transcendental Realism*; a doctrine which modern material Science more or less consciously accepts.'

NOTE XX., PAGE 61.

Philolaus : *'Ως διὰ τινὰς τιμωρίας ἁ ψυχὰ τῷ σώματι συνέζευκται, καὶ καθάπερ ἐν σώματι τούτῳ τέθαπται.*

Claud. Mamerc. ex *Philolao.* 'Anima induitur corpori per numerum, et immortalem, eandemque incorporalem convenientiam. Diligitur corpus ab animâ, quia sine eo non potest uti sensibus; a quo, postquam morte deducta est, agit in mundo incorporalem vitam.' See *Ritter and Preller*, p. 90.

Democritus, see in *Ueberweg*, i. 70, and *Ritter and Preller*, § 85, from Aristotle. Δημόκριτος, ὁμοίως καὶ Λεύκιππος, φησὶν τὰ σφαιροειδῆ ψυχὴν καὶ κινεῖν τὰ λοιπὰ (scilicet corpus) κινούμενα καὶ αὐτὰ, ὑπολαμβάνοντες τὴν ψυχὴν ειναι τὸ παρέχον τοῖς ζῴοις τὴν κίνησιν. And Lange, *Hist. of Mat.* i. 28 : 'Democritus recognises a distinction between soul and body which our modern Materialists would scarcely relish ; for with him the Soul is the really essential part of man ; the body is only the vessel of the soul, which latter, therefore, must be our principal care. For it is the seat of happiness.'

NOTE XXI., PAGE 62.

Plato, *Alcib.* 130 C. λείπεται, ἄνθρωπος, ἢ μηδὲν εἶναι, ἢ εἴπερ τί ἐστι, μηδὲν ἄλλο τὸν ἄνθρωπον συμβαίνειν ἢ ψυχήν· ἡ ψυχή ἐστιν ἄνθρωπος. The alternative, now so favoured by some naturalists, τὸ μὴ τί εἶναι, Plato does not condescend to refute. He takes it for granted that every one will see that Man τί ἐστι.

Antoninus, x. 38. Μέμνησο, ὅτι τὸ νευροσπαστοῦν ἐστὶν ἐκεῖνο, τὸ ἔνδον ἐγκεκρυμμένον· ἐκεῖνο ῥητορεία, ἐκεῖνο ζωὴ, ἐκεῖνο, εἰ δεῖ εἰπεῖν, ἄνθρωπος. Μηδέποτε συμπεριφαντάζου τὸ περικείμενον ἀγγειῶδες, καὶ τὰ ὀργάνια ταῦτα τὰ περιπεπλασμένα. Ἐπεί τοι οὐ μᾶλλόν τι τούτων ὄφελός ἐστι τῶν μορίων, χωρὶς τῆς κινούσης καὶ ἰσχούσης αὐτὰ αἰτίας, ἢ τῆς κεκρίδος τῇ ὑφαντρίᾳ, καὶ τοῦ καλάμου τῷ γράφοντι, καὶ τοῦ μαστιγίου τῷ ἡνιόχῳ.

Cicero, *de Rep.* vi. 24 : 'Tu vero enitere et sic habeto, non esse *te* mortalem, sed corpus hoc ; nec enim tu es quem forma ista declarat, sed Mens cujusque is est quisque ; non ea figura quæ digito demonstrari potest. Deum te igitur scito esse, siquidem Deus est qui viget, qui sentit, qui meminit, qui providet, qui tam regit et moderatur et movet id corpus cui præpositus est quam hunc mundum ille princeps

Deus : et ut mundum ex quâdam parte mortalem ipse Deus æternus, sic fragile corpus animus sempiternus movet.'

Macrobius : 'Qui videtur, non ipse verus homo est ; sed verus ille est a quo regitur quod videtur.'

Add R. Judas (in Gataker, 382) : 'Anima re verâ ipsa est homo ; illud enim ex Mose quod nobiscum loquitur, et intelligit, et dirigit, non est lingua vel cor vel cerebrum ejus, verum ista sunt Mosis organa tantum : anima autem ipse Moses est.'

Philo, *de H. D.*: *ὥστε ὁ δὴ καθ' ἕκαστον ἡμῶν νοῦς κυρίως καὶ πρὸς ἀλήθειαν ἄνθρωπός ἐστι.*

Cromwell wrote, 'These things do respect the souls of men and the spirits ;—which are the men. The mind is the man.'

NOTE XXII., PAGE 74.

Du Bois-Reymond declares himself as distinctly as Tyndall upon this point : 'The simple act of sensation is altogether beyond the bounds of analytical Mechanics. How can a number of selfless carbonic, nitrogenic, oxygenic, and hydrogenic Atoms be otherwise than indifferent to where they are placed or how they are moved? We can in no way imagine how their mere interaction can beget in them consciousness. What conceivable connection exists between certain definite movements of definite Atoms in my brain, and those undeniable facts which originate within myself, and are no further definable than in such expressions as "I feel pain ;" "I feel pleasure ;" "I taste something sweet ;" "I smell the scent of a rose ;" "I hear the sound of an organ ;" "I see the colour of red ;" and the certainty which follows from all these experiences, that "*I Am*"? The secretion of a gland we can explain from the structure of glands, but never can we explain an act of mind from the structure of the brain, or spiritual occurrences from the movements of Atoms. Even if we knew the brain and its movements as accurately as the Astronomer knows our solar system, we should have got no further than looking from without on a piece of machinery; we should still be no nearer to explaining *how* from the movements which we see sensation is aroused in the sensitive *man*; and *how* he is thereby led to *think*.' See in Carriere's *Sittl. Welt.* 68.

And as determined is Fick, the Anatomist: 'Sensation is, and ever must remain, a non-material Fact. Psychology can regard it as nothing but an underived phenomenon, a Fact simply *given* in our consciousness (ein Urphänomen, ein unmittelbar gegebenes Einfaches).'—*Ibid.* 65.

And so Carriere himself (*Ibid.* 65): 'When Strauss says, "Seeing that, under certain conditions, motion is transformed into heat, why should there not, in like manner, be conditions under which heat becomes transformed into sensation?" he forgets that the motion resulting from collision and friction does *not* transform itself into heat; it only produces *other movements* (the movements of the smallest particles in a mass of matter in the place of the movement of the mass itself). And these movements *are not heat*, but only excite *in me*, a sensitive being, the *sense* of heat. Heat is entirely and exclusively *a sensation in Me.* In the world without me there is no heat, but only certain vibrations of the atoms and the ether which awaken *in me*, subjectively, the sensation of Heat. In the thermometer there is manifested a greater extension of the column of quicksilver when intensified movement drives the atoms further apart, but the quicksilver has as little *feeling* of heat as waves of air have of the sound which, by their means, is awakened *in us.* Movement remains still a something entirely external and objective; while Sensation is a something entirely internal and subjective. At least, the only relation between the two is that of the convex to the concave side of a circle. So that when Strauss says, "On one side a nerve is touched; on the other side there springs up a corresponding sensation or perception," the question still recurs, "*In whom* does this sensation or perception spring up?" Movement results in collision;—*who* or *what* is collided? *who*, or *what*, does not transmit this collision onward but *transforms* it into a sensation?" Whatever this be, it must be certainly a sensitive, self-existent Being, which takes up into itself the impression from without, and by means of this impression is stimulated to a living act within itself, which we term Sensation.'

Note XXIII., Page 80.

See Xenophanes, apud Sext. *Hyp.* i. 224:

ὅππη γὰρ ἐμὸν νόον εἰρύσαιμι,
εἰς ἓν ταὐτό τε πᾶν ἀνελύετο· πᾶν δ' ἐὸν αἰεὶ
πάντῃ ἀνελκόμενον μίαν εἰς φύσιν ἵστασθ' ὁμοίην.

Heraclitus, in Ritter and Preller, § 42: Δεῖ ἕπεσθαι τῷ ξυνῷ· τοῦ λόγου δὲ ἐόντος ξυνοῦ ζώουσιν οἱ πολλοὶ ὡς ἰδίαν ἔχοντες φρόνησιν· ἥ δ' ἔστιν οὐκ ἄλλο τι ἀλλ' ἐξήγησις τοῦ τρόπου τῆς τοῦ παντὸς διοικήσεως.

Anaxagoras, in Aristotle, *Physic.* viii. 1 (see Ritter and Preller, § 52, 53): Ὅμου πάντων ὄντων καὶ ἠρεμούντων τὸν ἄπειρον χρόνον, κίνησιν ἐμποιῆσαι τὸν Νοῦν καὶ διακρῖναι. And in *Diog. L.* ii. 6: πάντα χρήματα ἦν ὁμοῦ· εἶτα Νοῦς ἐλθὼν αὐτὰ διεκόσμησε. And in *Simpl.* 33, 35: ὁκοῖα ἔμελλεν ἔσεσθαι, καὶ ὁκοῖα ἦν, καὶ ἄσσα νῦν ἔστι, καὶ ὁκοῖα ἔσται, πάντα διεκόσμησε Νόος.

With which compare Cicero *de N. D.* i. 11: 'Anaxagoras primus, omnium rerum descriptionem et modum Mentis infinitæ vi ac ratione designari et confici voluit.'

Plato, *Philebus*, 29 D: πότερον τὰ ξύμπαντα ἐπιτροπεύειν φῶμεν τὴν τοῦ ἀλόγου καὶ εἰκῇ δύναμιν, καὶ τὰ ὅπῃ ἔτυχεν· ἢ τοὐναντία νοῦν καὶ φρόνησίν τινα θαυμαστὴν συνταττουσὰν διακυβερνᾷν; νοῦν πάντα διακοσμεῖν.—*Ibid.* 30 D: ἀεὶ τοῦ παντὸς Νοῦς ἄρχει.

Antoninus, vii. 9: πάντα ἀλλήλοις ἐπιπλέκεται, καὶ ἡ σύνδεσις ἱερά, καὶ σχεδόν τι οὐδὲν ἀλλότριον ἄλλο ἄλλῳ· συγκατατέτακται γὰρ καὶ συγκοσμεῖ τὸν αὐτὸν κόσμον· κόσμός τε γὰρ εἷς διὰ ἁπάντων, καὶ θεὸς εἷς διὰ πάντων, καὶ οὐσία μία, καὶ νόμος εἷς, λόγος κοινὸς πάντων τῶν νοερῶν ζώων, καὶ ἀλήθεια μία.

NOTE XXIV., PAGE 83.

Plato, *Phædo*, 98 B: ἀπὸ δὴ θαυμαστῆς, ἐλπίδος ᾠχόμην φερόμενος, ἐπειδὴ προϊὼν καὶ ἀναγιγνώσκων ὁρῶ ἄνδρα τῷ μὲν νῷ οὐδὲν χρώμενον οὐδέ τινας αἰτίας ἐπαιτιώμενον εἰς τὸ διακοσμεῖν τὰ πράγματα, ἀέρας δὲ καὶ αἰθέρας καὶ ὕδατα αἰτιώμενον καὶ ἄλλα πολλὰ καὶ ἄτοπα· καί μοι ἔδοξεν ὁμοιότατον πεπονθέναι ὥς περ ἂν εἴ τις λέγων ὅτι Σωκράτης πάντα ὅσα πράττει νῷ πράττει, κἄπειτα ἐπιχειρήσας λέγειν τὰς αἰτίας ἑκάστων ὧν πράττω, λέγοι πρῶτον μὲν ὅτι διὰ ταῦτα νῦν ἐνθάδε κάθημαι, ὅτι ξύγκειταί μου τὸ σῶμα ἐξ ὀστῶν καὶ νεύρων, καὶ τὰ μὲν ὀστᾶ ἐστὶ στεῤῥὰ καὶ διαφυὰς ἔχει χωρὶς ἀπ᾽ ἀλλήλων, τὰ δὲ νεῦρα οἷα ἐπιτείνεσθαι καὶ ἀνίεσθαι . . . καὶ διὰ ταύτην τὴν αἰτίαν ξυγκαμφθεὶς ἐνθάδε κάθημαι.

Antoninus, ii. 3: Τὰ τῶν θεῶν προνοίας μεστά. Τὰ τῆς τύχης οὐκ ἄνευ φύσεως, ἢ συγκλώσεως καὶ ἐπιπλοκῆς τῶν προνοίᾳ διοικουμένων· πάντα ἐκεῖθεν ῥεῖ.

Ibid. iv. 36: Θεώρει διηνεκῶς πάντα κατὰ μεταβολὴν γινόμενα καὶ ἐθίζου ἐννοεῖν ὅτι οὐδὲν οὕτως φιλεῖ ἡ τῶν ὅλων φύσις ὡς τὸ τὰ ὄντα μεταβάλλειν καὶ ποιεῖν νέα ὅμοια. Σπέρμα γὰρ τρόπον τινὰ πᾶν τὸ ὂν τοῦ ἐξ αὐτοῦ ἐσομένου. Σὺ δὲ μόνα σπέρματα φαντάζῃ τὰ εἰς γῆν ἢ μήτραν καταβαλλόμενα· τοῦτο δὲ λίαν ἰδιωτικόν.

Ibid. iv. 40: Ὡς ἓν ζῷον τὸν κόσμον, μίαν οὐσίαν καὶ ψυχὴν *μίαν ἐπέχον, συνεχῶς ἐπινοεῖν· καὶ πῶς εἰς αἴσθησιν μίαν τὴν τούτου πάντα ἀναδίδοται· καὶ πῶς ὁρμῇ μιᾷ πάντα πράσσει· καὶ πῶς πάντα πάντων τῶν γινομένων συναίτια· καὶ οἵά τις ἡ σύννησις καὶ συμμήρυσις.*

Ibid. iv. 45 : *Τὰ ἑξῆς ἀεὶ τοῖς προηγησαμένοις οἰκείως ἐπιγίνεται· οὐ γὰρ οἷον καταρίθμησίς τίς ἐστιν ἀπηρτημένως καὶ μόνον τὸ κατηναγκασμένον ἔχουσα, ἀλλὰ συνάφεια εὔλογος· καὶ ὥσπερ συντέτακται συνηρμοσμένως τὰ ὄντα, οὕτως τὰ γινόμενα οὐ διαδοχὴν ψιλὴν ἀλλὰ θαυμαστήν τινα οἰκειότητα ἐμφαίνει.*

Ibid. vii. 75 : *Ἡ τοῦ ὅλου φύσις ἐπὶ τὴν κοσμοποιΐαν ὥρμησεν· νῦν δὲ ἤτοι πᾶν τὸ γινομένων κατ' ἐπακολούθησιν γίνεται, ἢ ἀλόγιστα καὶ τὰ κυριώτατά ἐστιν, ἐφ' ἃ ποιεῖται ἰδίαν ὁρμὴν τὸ τοῦ κόσμου ἡγεμονικόν.*

In my version I have expanded the passage into its full meaning. Comp. Mr. Long's note on it.

Add Manilius : 'Totumque *alterno consensu* vivere mundum.'

Tertullian : 'Ratio universitatem ex diversitate composuit, ut omnia æmulis substantiis sub unitate constarent.'

Synesius : *Οὐ γάρ ἐστιν ὁ κόσμος τὸ ἁπλῶς ἕν, ἀλλὰ τὸ ἐκ πολλῶν ἕν.*

Seneca (*Qu. Nat.* vii. 27) : 'Tota hujus mundi concordia discordibus constat ; non ad unam natura formam opus suum præstat, sed ipsa varietate se jactat.'

It is this co-ordination of all things in a graduated system of means to ends, on which Herbart insists as the one great proof of Mind in Nature, and the source of all true adoration of the Invisible. 'The continuance of a series of movements once begun may be conceivable ; nay, the commencement of any one particular series of movements, in the sphere of sense, seeing this may be referred to corresponding movements, in the sphere beyond sense, of the primitive Atoms ; but the commencement of a *planned and co-ordinated* *course* of movements, this is, and ever must remain, in the highest degree wonderful.'[1] And Mr. Mill similarly says, 'If ignorance is, with Sir William Hamilton, a necessary condition of wonder, can he find nothing to wonder at in *the Origin of that System* of which Newton discovered the laws?'[2]

NOTE XXV., PAGE 91.

Xenophon, *Mem. Socratis*, 1, iv. 3: Οὐδε γὰρ τὴν ἑαυτοῦ σύ γε ψυχὴν ὁρᾷς, ἣ τοῦ σώματος κυρία ἐστίν.

Ibid. iv. 3, 6: ὅτι δέ γε ἀληθῆ λέγω, καὶ σὺ γνώσῃ, ἂν μὴ ἀναμένῃς ἕως ἂν τὰς μορφὰς τῶν θεῶν ἴδῃς, ἀλλ' ἐξαρκῇ σοι τὰ ἔργα αὐτῶν ὁρῶντι σέβεσθαι καὶ τιμᾷν τοὺς θεούς. . . . Ἀλλὰ μὴν ἀνθρώπου γε ψυχὴ, εἴπερ τι καὶ ἄλλο τῶν ἀνθρωπίνων, τοῦ θείου μετέχει, ὁρᾶται δὲ οὐδ' αὐτή. ῾Α χρὴ κατανοοῦντα μὴ καταφρονεῖν τῶν ἀοράτων, ἀλλ' ἐκ τῶν γιγνομένων τὴν δύναμιν αὐτῶν καταμανθάνοντα, τιμᾷν τὸ δαιμόνιον.

Plato, *Timæus*, 28 B: ῾Ο δὴ πᾶς οὐρανὸς, ἢ κόσμος, ἢ καὶ ἄλλο ὅ τί ποτε ὀνομαζόμενος μάλιστ' ἂν δέχοιτο, τοῦθ' ἡμῖν ὠνομάσθω· σκεπτέον οὖν δὴ περὶ αὐτοῦ πρῶτον, ὅπερ ὑπόκειται περὶ παντὸς ἐν ἀρχῇ δεῖν σκοπεῖν, πότερον ἦν ἀεὶ, γενέσεως ἀρχὴν ἔχων οὐδεμίαν, ἢ γέγονεν, ἀπ' ἀρχῆς τινὸς ἀρξάμενος· γέγονεν. ὁρατὸς γὰρ ἁπτός τέ ἐστι, καὶ σῶμα ἔχων. πάντα δὲ τὰ τοιαῦτα αἰσθητά· τὰ δὲ αἰσθητὰ δόξῃ περιληπτὰ μετ' αἰσθήσεως, γιγνόμενα καὶ γεννητὰ ἐφάνη. τῷ δ' αὖ γενομένῳ φαμὲν ὑπ' αἰτίου τινὸς ἀνάγκην εἶναι γενέσθαι. τὸν μὲν οὖν ποιητὴν καὶ πατέρα τοῦδε τοῦ παντὸς εὑρεῖν τε ἔργον καὶ εὑρόντα εἰς πάντας ἀδύνατον λέγειν.

Lehrb. d. Phil. § 155; 'Der Fortgang einmal angefangener Reihen des Naturlaufs bleibt nicht mehr wunderbar; wunderbar ist eben so wenig der *Anfang irgend einer* Reihe von Begebenheiten *im allgemeinen*; diese musste hervorgehn aus den ursprünglichen Bewegungen; aber wunderbar im höchsten Grade ist und bleibt das Beginnen eines *zweckmässigen* Naturlaufes.'

[2] Mill on Hamilton, p. 544.

NOTE XXVI., PAGE 93.

Aristotle, *Met.* xii. 7 : Νοῦς *οὐσία κεχωρισμένη τῶν αἰσθητῶν :—νόησις νοήσεως :—αὐτὸν νοεῖ :—τὸ αὐτό ἐστι τὸ νοοῦν καὶ τὸ νοούμενον.*

Id. *De Cælo*, i. 4 : *ὁ θεὸς καὶ ἡ φύσις οὐδὲν μάτην ποιοῦσιν.*

Id. *Met.* xii. 7 : *ἡ θεωρία τὸ ἥδιστον καὶ ἄριστόν :—καὶ ζωὴ δέ γε ἐνυπάρχει. ἡ γὰρ νοῦ ἐνέργεια ζωή.*

Id.: *Ἀνάγκη εἶναι ἀΐδιον τινὰ οὐσίαν ἀκίνητον. φαμὲν δὲ τὸν θεὸν εἶναι ζῶον ἀΐδιον, ἄριστον.*

Antoninus, vi. 44 : Εἰ *μὲν οὖν ἐβουλεύσαντο περὶ ἐμοῦ καὶ τῶν ἐμοὶ συμβῆναι ὀφειλόντων οἱ θεοὶ, καλῶς ἐβουλεύσαντο. ἄβουλον γὰρ θεὸν οὐδὲ ἐπινοῆσαι ῥᾴδιον· κακοποιῆσαι δέ με διὰ τίνα αἰτίαν ἔμελλον ὁρμᾷν ; τί γὰρ αὐτοῖς, ἢ τῷ κοινῷ, οὗ μάλιστα προνοοῦνται, ἐκ τούτου περιεγένετο ; εἰ δὲ μὴ ἐβουλεύσαντο κατ' ἰδίαν περὶ ἐμοῦ, περί γε τῶν κοινῶν πάντως ἐβουλεύσαντο, οἷς κατ' ἐπακολούθησιν καὶ ταῦτα συμβαίνοντα, ἀσπάζεσθαι καὶ στέργειν ὀφείλω.*

Ibid. xii. 12 : *τὸ ἑξῆς τῇ φύσει, μήτε θεοῖς μεμπτέον· οὐδὲν γὰρ ἑκόντες ἢ ἄκοντες ἁμαρτάνουσι.* Comp. Boethius, iii. 10 : 'Deum rerum omnium principem bonum esse communis humanorum conceptio probat animorum. Nam cum nihil Deo melius excogitari queat, id, quo melius nihil est, bonum esse quis dubitet ?'

Anton. x. 5 : Ὅ *τι ἄν σοι συμβαίνῃ τοῦτό σοι ἐξ αἰῶνος προκατεσκευάζετο· καὶ ἡ ἐπιπλοκὴ τῶν αἰτίων συνέκλωθε τήν τε σὴν ὑπόστασιν ἐξ ἀϊδίου, καὶ τὴν τούτου σύμβασιν.*

NOTE XXVII., PAGE 97.

Xenophanes :

εἷς θεὸς ἔν τε θεοῖσι καὶ ἀνθρώποισι μέγιστος,
οὔτε δέμας θνητοῖσιν ὅμοιος οὔτε νόημα,
ἀλλ' ἀπάνευθε πόνοιο, νόου φρενὶ πάντα κραδαίνει.

Where, so far from denying to God a mind like that of man (as Lewes interprets it), the only mark by which Xenophanes distinguishes the divine mind from the human is its being intuitive in its perceptions, and not discursive; its working by immediate insight and not mediate inference. For the *νόημα* in this passage means the 'understanding' which, by laborious 'discourse' (i.e. by 'running through' a series of propositions) attains to its conclusions, in distinction from the *νοῦς*, or intuitive perceptive power. Spinoza has described this *νοῦς* in similar terms (according to Saisset, *Essais*, i. 127) when he calls Intuition 'ce coup d'œil instantané, par lequel l'esprit, sans effort (i.e. *ἀπάνευθε πόνοιο*), sans obstacle, *sans intermédiaire*, saisit son objet, l'embrasse tout entier, et s'y repose, en quelque sorte, dans une lumière sans mélange, avec une parfaite sérénité.' *φρήν* is 'instinctive force' (from *φρήν*, the midriff), whence *ἐκ φρενός* 'from one's very heart.' Symonds, in his *Greek Poets* (ii. 138), translates the line, 'without exertion, by energy of mind, he sways the universe of things.' Empedocles has a similar line (see Ritter and Preller, p. 147), when he says that God is not head adjusted to limbs, like human beings,

> *ἀλλὰ φρὴν ἱερὴ καὶ ἀθέσφατος ἔπλετο μοῦνον,*
> *φροντίσι κόσμον ἅπαντα καταΐσσουσα θοῇσιν.*

Which Lewes (*Hist. Phil.* i. 139) renders,

> He is wholly and perfectly, mind ineffable, holy;
> With rapid and swift-glancing thought pervading the
> whole world.

Lanfrey, in his *Life of Napoleon* (i. 7), has a similar distinction when he says, 'Napoleon had high patriotic emotions, to which he surrendered himself by *instinct* (= *νόου φρενὶ*), before he could grasp them by *intelligence* (= *νοήματι*).' And Mr. S. Brooke has well described the divine mind (*Fight of Faith*, p. 281) when he writes, 'Though all God's works are known to Him from the beginning, they are known without any labour of the reflective faculty, such as we possess, upon them. They have not been thought out nor thought upon. They are done at once; thought, act, and will being as one; no passing from one to the other; no meditation; no sense of the possible or the impossible; infinite wisdom and power acting as a child acts.' An epitaph on Sir John Hoby, in Bisham church (1566), says of him:

> He possest
> A deep *discoursing* head, a noble breast.

And Milton makes the same distinction in *Paradise Lost*, v. 488:

> Reason is her being,
> Discursive or intuitive; discourse
> Is oftest yours, the latter most is ours.

That is, the Angels, like their divine Original, discern *ἀπάνευθε πόνοιο*, without the labour of thinking.

Xenophanes, therefore, places the unlikeness of God to man in outward form only (*δέμας*) and '*discourse* of reason' (*νόημα*); not in *Mind* (*νοῦς*), or intuitive perception.'

LONDON: PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET